

London Borough of Harrow

Water management and drought planning

Sustainable Development and Enterprise Scrutiny Sub-Committee

Final Report

This report contains key findings made as a result of a challenge panel held on 9 August 2006

**Cllr Jerry Miles
Cllr Yogesh Teli
Cllr Susan Hall
Cllr Julia Merison
Cllr Nana Asante**

Co-opted members of the panel:

**Sarah Kersey (Harrow Agenda 21)
David Bland (Consumer Council for Water)**

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Chairman's introduction

At the time that this panel was convened, and at the time of writing, the pressure of drought and water shortage is making itself felt not only in Harrow but across the south-east.

Officers from local authorities, water authorities and other bodies are, we have learned, working hard to alleviate the immediate consequences of this situation. However, in carrying out this challenge panel, my fellow members and I did not wish to concentrate on immediate concerns which – we hope – will recede, at least temporarily, over the winter months. Our intention has been to take a long-term approach, thinking strategically about how water use and water supply is changing as a result of climate change and increasing demand, and examining how we as a borough can meet that challenge.

I was grateful for the expertise of Sarah Kersey and David Bland, external experts who sat on our panel, and especially to Mike Pocock from Three Valleys Water who attended, without whose candid evidence and assistance our investigation would have been impossible.

Thanks are also due to the officers who attended from Urban Living to provide us with valuable insight into the way that these changes might affect our residents.

Finally, a couple of words on the structure of the report. We have placed key findings and recommendations (where appropriate) in the main body of the report. More detailed evidence – gathered during the meeting and afterwards – is presented in an appendix at the back of the report. Evidence is, of course, cross-referenced throughout. In this way we hope that the casual and detailed reader alike will find something of use here.

Councillor Jerry Miles
August 2006

Methodology

The event was conducted as a challenge panel, in which Three Valleys Water were asked a number of questions on the basis of a full briefing pack which members had received beforehand. The membership and attendance was as follows:

Elected Members

Cllr Jerry Miles
Cllr Yogesh Teli
Cllr Julia Merison
Cllr Nana Asante
Cllr Susan Hall

Portfolio Holder

Cllr Eileen Kinnear (Portfolio Holder, Urban Living)

Co-opted members

Sarah Kersey, Harrow Agenda 21
David Bland, Consumer Council for Water (did not attend panel, evidence and comment provided subsequently)

Officers

Michael Hart, Director of Strategy, Urban Living
Gareth Llywelyn-Roberts, Head of Community Safety
David Ward, Group Manager, Audit and Risk
Dave Corby, Service Manager, Public Realm Maintenance

Witness

Mike Pocock, Three Valleys Water

Where our findings and recommendations will go

After agreement at committee, the findings and recommendations in this report will be despatched to the relevant Portfolio Holder for final approval on implementation.

The timescales for implementing these recommendations are being agreed at committee, and upon agreement will be added to the body of this report.

Recommendations will be classified as either short, medium or long term depending on their operational and strategic importance.

Noted minutes were made and can be made available separately – however, all relevant points have been incorporated into this report, along with explanatory and background information

This report comprises twenty-two pages in total.

Findings

Communications and corporate responsibility

Finding 1: Communication generally

The current drought situation has been caused predominantly by extremely low groundwater levels, a result of unusually low winter rainfall over the last two years. However, many members of the public perceive the drought to be a problem of the water companies' own making. Bad publicity garnered by a couple of water companies (predominantly on the issue of leaks and company profits) has given the water companies a bad public image. People perceive an environment of continual restrictions on the use of a resource which they feel should be plentiful. Businesses, too, feel pressure and significant uncertainty over the prospect of possible restrictions on use. We were reassured by Mike Pocock, the Head of Strategic Planning at Three Valleys, who attended the panel meeting to give evidence, that the prospect of further restrictions on water use is not significant this year. The very earliest, we were told, that a drought order¹ would be imposed would be the spring of next year – if there was another dry winter. However, the public have yet to hear this reassurance, and in many cases have not been informed of what a drought order is, what its implications are, what further steps that water companies can take, and are taking now, and how it is different from a hosepipe ban, or from a scarcity or severe drought order².

This, then, is not only a problem for the water companies. It means that the public, on the whole, may well be less willing not only to comply with water restrictions (because they feel they are not getting the full picture from the water company), but to take the responsible steps to water conservation which the council and the water companies are trying to encourage.

That said, according to Mike Pocock, compliance with the current hosepipe ban (the first to be imposed on the borough since 1992) has been good. The company operates a graduated process before resorting to prosecution for contravention of a hosepipe ban³. According to them, the practice of sending warning letters to people is effective in ensuring compliance. However, we considered that there would always be a problem of covert use, or instances where neighbours would be unwilling to report on hosepipe users. All seem agreed that, although enforcement is effective to an extent, more long-term communication and engagement with the public should be encouraged.

The question is, how? It is all very well suggesting that Three Valleys “engage” with local people. To a greater or lesser extent, this already happens – an active public relations campaign has been underway for some time now, and Three Valleys have stated that consumption has reduced by 7% since the hosepipe ban came into force. However, discussions we have had with some of our constituents has shown that many residents are still not even aware of the hosepipe ban's existence.

We were pleased, then, to be able to make two concrete proposals to Three Valleys at the time of the meeting on this subject. Firstly, as a result of our discussion they will be placing advertising in Harrow People⁴. This is obviously useful in the short term and, since the magazine is delivered to all addresses in the borough, it will help to spread the message of water conservation. However, we do not think that closer co-operation should end there. The

¹ Details of drought orders and the restrictions they impose on homes and businesses can be found at Appendix 3.

² Ibid.

³ Breach of a hosepipe ban is a criminal offence under the Water Act, and perpetrators can be fined up to £1000.

⁴ The council's regular newspaper.

cross-border “Beat the drought” campaign⁵ is predicated on continued co-operation between local authorities and water companies, and we agree that this presents an opportunity to work much more closely at an officer-to-officer level⁶. Additionally, this will provide a method for the council and Three Valleys to work together more closely, and build closer relationships which will assist with strategic planning in the future. Closer, meaningful, direct communication in this fashion can only serve to improve the services provided to residents, and both organisations’ commitment to local accountability. The second proposal we were able to make related to closer engagement with local communities through the council, something which we will discuss in more detail later in this report.

This need for closer engagement must also relate to pre and post-restriction strategies. To use finite resources effectively, the borough must be involved in and party to strategies being developed by Three Valleys relating to the imposition of restrictions or regulation of supply. A drought order has the potential to cause significant difficulties for the council and the way it delivers services⁷. Drought orders – if introduced – can be either blanket or tailored to particular need, and in planning for the imposition of such orders the council should work closely with Three Valleys to ensure that restrictions meet everyone’s needs.

Although Thames Water are only responsible for wastewater services in Harrow, we consider it important that the council liaise with them on a similar basis.

Recommendation A: We recommend that Three Valleys and Thames should consult the Council, and that the council should consult the water companies, over strategic planning and development for the borough, and particularly on the development of plans such as the Economic Development Strategy, on an ongoing rather than an ad-hoc basis.

Finding 2: Direct engagement with local people, the community and voluntary sectors

Mike Pocock informed us that, at the moment, Three Valleys probably does not do enough to engage with local people at the community level. Sending out leaflets and making press statements does some good and is useful, but it does not address the fundamental lack of confidence that many people have in water companies. Obviously it is difficult for a water company serving a large area to develop a sufficiently detailed local knowledge to deal with individual community, resident and amenity groups, but the council does have this knowledge.

We were told that Three Valleys are trying to encourage people to restrict their water usage on a voluntary basis, rather than to impose blanket restrictions (which we think does not take into account local variations in supply and demand). We think that the only way they can carry this out, and the only way to develop links with local communities and open a candid dialogue with people on how Three Valleys is attempting to deal with the situation, is to meet local people and local groups directly, discussing the present and future situation with them openly and frankly – not as part of a public relations exercise, but as a conversation between two inter-reliant partners.

⁵ See Appendix 3

⁶ We received some more evidence on communication between water companies and the council specific to the subject of leaks and repairs – this can be found in the next section of the report.

⁷ Some particular issues are covered as part of the section on “Environment” below, in section 3.

Recommendation B: We recommend that Three Valleys work with Harrow (and other councils within its service area) to develop an information base for itself that will permit it to carry out a sustained conversation with local people through residents' and amenity groups.

Finding 3: Corporate responsibility

We briefly discussed the regulatory regime that water companies in the UK work under⁸. We had the impression before the meeting, which was confirmed to us by Mike Pocock, that the regulatory framework is outdated and requires change to make it suitable for a future where water is an intrinsically valuable resource. There will also be circumstances where regulation, and the requirement to fulfil performance indicators laid down by Ofwat⁹, might cause conflict with the priorities of the council, or those of local people. These instances are unfortunate but in the current framework, we consider them to be inevitable. For example, we were told about the inflexibility of hosepipe bans, which only control water use for watering gardens and washing cars with hoses, not other domestic use such as for filling swimming pools¹⁰. We thought that Ofwat's approach was short-term in nature. Although they require a twenty five to thirty year forward look in terms of strategic planning¹¹, in many instances the insistence on rigid adherence to performance indicators¹² hinders this long term planning facility.

Notwithstanding this, we consider that Three Valleys can mitigate some of this inflexibility through more innovative and flexible ways of working – in particular, through more effective dialogue with the public, and with businesses, and by co-operating more closely with neighbouring water companies¹³. Although we do not of course think that Three Valleys is guilty of this, an imperfect and inflexible regulatory regime provides a catch-all excuse for various failings and potentially might be an effective external source of blame whenever performance falls below what might be expected. Three Valleys continues to lobby for change in the regulations. The council should, when and where appropriate, also lobby the Mayor and GLA, and central government for changes to be made.

Recommendation C: We recommend that the council support water companies' lobbying for regulatory change in the water industry, but that in the meantime all parties should be vigilant of instances where competing priorities (within a particular organisation as well as between two separate ones) might create a conflict which could adversely impact upon water conservation measures.

⁸ See Appendix 1

⁹ The Office of the Water Regulator, established under the Water Act to monitor water companies' performance.

¹⁰ The Water Act is quite specific on this.

¹¹ See Appendix 1 for the more detailed legal framework underpinning this.

¹² Targets and measures that allow performance to be assessed according to a predefined set of criteria.

¹³ More specific evidence was gathered on this issue and can be found later in this report.

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Issue 2

Leakage and repairs

Finding 4: Emergency work and risk planning

Three Valleys Water visited the council in November 2005 to discuss matters relating to leakage and repairs¹⁴. Since then, we anticipated that work would have been carried out as part of this project – it seems from the evidence we received that this has been going to plan. However, other works need to be carried out outside of this framework. Emergency work in particular cannot be planned for.

Emergency work can have a significant impact upon the local area. For example, a recent mains burst in the Wealdstone area led to the Civic Centre being temporarily closed – other, similar problems have resulted in problems for businesses across the borough. Larger firms probably find these problems more straightforward to deal with, as they will have business continuity plans, but for smaller concerns uncertainty over water supply is a critical issue. Some of these problems may be unavoidable, but we did not consider that Three Valleys or Thames make sufficient effort to inform local residents and businesses when work will be necessary. We also considered that the economic decision to be made on fixing mains should be tempered by some consideration of the inconvenience to local people.

Short term risk planning – to deal with interruptions to supply more generally – is centred on Harrow on the Hill reservoir, which we learned has an important strategic role in the local water network¹⁵. We considered, in general, that Three Valleys' risk management strategies could continue to deliver an uninterrupted supply, as contingency plans are in place to bring water through from the Clay Lane treatment plant if necessary.

Recommendation D: We recommend that Three Valleys consult closer with the council and local people, where possible, when emergency works are to be carried out.

Finding 5: Planned work

We were told that leakage figures in the Three Valleys area currently stand at 140,000,000 litres per day¹⁶. We found this number staggering, but apparently it is well within the annual Ofwat water leakage target. For comparison, in the Thames region, 913,000,000 litres of water is wasted per day¹⁷. Three Valleys operate some 16,000 kilometres of mains – this amounts to 8750 litres per kilometre of pipe¹⁸.

Ofwat have arrived on the figure of 15% as an economic target¹⁹. Below this point, they have judged that repairing leaks is uneconomic – that is to say, they are physically awkward to reach, or otherwise too difficult to effectively repair. The last 15% may also come from a large number of relatively small leaks which are tricky to locate. Obviously if the number of small leaks were to rise so as to put the leakage figures significantly above the 15% target, Ofwat would require that

¹⁴ The minutes of this discussion are reprinted in Appendix 5.

¹⁵ It provides most of the immediate area's water (as it is gravity-fed it needs to be at the highest point, locally).

¹⁶ Amounting to 17% of total water supplied. All information supplied by Ofwat.

¹⁷ Amounting to 33% of total water supplied (readers are reminded that Thames serve more customers and hence pipe more water than Three Valleys).

¹⁸ Or 3076 gallons per mile.

¹⁹ *Report on Leakage and Water Efficiency*, Ofwat (1997)

the figure was brought down irrespective of economic considerations. Whether this would involve costs being passed on to the consumer is unclear, but Ofwat keeps a close eye on rate rises.

The economic cost/benefit analysis does, we note, only take account of immediate financial considerations. Mike Pocock stated that it was open to government to set a political target. Obviously there would be price consequences to bear for the consumer.

We were also told that some 1/3 of leaks occur on customers' pipes.

This is an extremely delicate issue, not as simple as demanding that water companies fix all their leaks no matter what the cost. One person's acceptable level might, to another, seem way too high. Consumers, unfamiliar with this balance, will naturally insist that all leaks be fixed, and that they should not have to pay for it, since fixing leaks should be an ordinary expenditure, and aggressive replacement works would reduce existing leaks and prevent new ones, actually saving money, in the long term. This is a tempting analysis but does not accord with Three Valleys' view. We have been told that it is, in fact, cheaper to continually repair a main than actually replace it (in the case of emergency repairs, that is). However, economic issues – the base cost of repair versus the base cost involved in water loss, per litre, might not be the only ones to place on cost/benefit balance. There are other significant factors which Ofwat's regulations and targets arguably do not take account of²⁰.

We consider that a significant one of these goes back to the first issue raised in this report – that of public perception. A leaking main “looks bad”. We were pleased to note that Three Valleys attempt to repair “visible” leaks within 24 hours, and that they give priority to “clustered” leaks which indicate a fault in a particular area, but Three Valleys admit that inevitably there are instances where this does not happen. When people see water pooling on the road and running down gutters when they are meant to be conserving water, naturally they will feel less inclined to save water themselves, because clearly water is so plentiful that it is being allowed to fall back into the sewers without even reaching the taps.

Recommendation E: We recommend that Three Valleys should take account of the potential additional implications when developing their policy on leakage repairs, and that Three Valleys develop plans to reduce this level of loss. Additionally, we recommend that government be lobbied to alter Ofwat's rigid definition of “economic” levels of leakage.

²⁰ Public perception is an obvious one, but the potential for leaks to worsen, and the implications on water pressure are also considerations.

Issue 3

Use and water management

The use of water and water management in the long term are things which, at the moment, appear less tangible. In local terms, it presents a difficult issue – once again, presenting matters over which the council, and even individual water companies, have little influence. Large scale infrastructure projects such as a national water grid or new reservoirs have been presented as options, but there are more local changes that can be made which can have a direct effect on demand and supply in the medium to long term.

Water metering has the potential to be one of these issues.

Finding 6: Water meters

Briefly, a water meter can be easily installed onto the service pipe of a property, measuring the throughput of water and allowing users to be charged according to the amount of water they use, rather than at a flat rate. Water companies are not permitted to insist that their customers consent to having water meters installed²¹, but Three Valleys is pursuing a campaign to encourage take-up, and anticipates that in twenty years time the majority of households in its water supply area will have water meters, because of a policy decision to fit meters when people move house.

We were pleased that Three Valleys were aggressively pursuing metering. Many people are ambivalent to its use but it provides key benefits. In particular, we were persuaded by the argument that, if metering were in place, mandatory restrictions on use might not be so central to water management in this country, since people would voluntarily regulate their use to keep costs down. While no means proven (and while restrictions would probably still be necessary under certain circumstances) this is an attractive proposition which would benefit and empower consumers.

Water companies might be dissuaded from installing meters – after all, less water used, leading to lower bills, would lead to diminished income for them. However, the regulatory (and political) pressure to implement water saving measures has enabled water companies to make this more long-term decision.

That said, within the current framework, there is a limit to the amount water companies do. Installing meters on an ad hoc basis is more expensive than doing so in one go, or in a planned way to reduce costs.

Affordability, the idea of “average” use and the protection of vulnerable groups are the key issues here. Affordability is important because of the infrastructure costs necessary to converting to metered billing for Three Valleys, as well as the cost benefit to consumers. Users need to be persuaded that their bills would indeed be reduced if metering was to be introduced across the board. Often people are told that, for an average user, prices will fall, but the concept of average use is obviously notional.

²¹ The exception is Folkestone and Dover Water, who are permitted to do so by virtue of being the only area in the country granted “water scarcity” status.

The protection of vulnerable groups is also critical. Currently, the law does not allow water supply to be restricted, much less turned off, to those who do not pay their bills. Mike Pocock suggested that a tariff system might be appropriate for some consumers, or that social services might act as a backstop for unpaid bills. The former is something which, without more detailed data and proposals, we are unable to comment on. The latter is something which we would not approve of. Adding another uncertain, demand-led element to social services' budgets would not be helpful, and an effective repayment scheme might end up costing more to administer than the payments themselves. We do not think that a compulsory metering regime should provide a reason to transfer supply and demand risk to the local authority, especially where water provision is regional and national issue. In any case, such a discussion, with government being unwilling to pursue a path of compulsory metering, is somewhat academic.

Recommendation F: We recommend that the council robustly lobby the government to allow Three Valleys to introduce compulsory water across the borough, given the clear benefits they afford in terms of costs to consumers and water conservation.

Recommendation G: We recommend that such a scheme consider as paramount the interests of vulnerable users, and ensure that transactional and other costs (in particular those relating to non-payment of bills) do not under any circumstances fall to local authorities to absorb, but be dealt with on a national basis.

Finding 7: Demand (consumer end)

There are, however, many steps that individual homes and businesses can take to reduce the level of demand. People can install dual-flush toilets, or spray taps that regulate water flow. Three Valleys are working in partnership with the council to make available free “hippos”, devices that sit in a toilet cistern to reduce the cistern’s capacity (although most toilets produced since 1993 have a relatively low capacity anyway). Takeup of the latter has been high as it has been a convenient and straightforward way for people to save water.

This is, perhaps, part of the problem. Developing technological, domestic solution such as these undoubtedly has an impact on use but it does not address the fundamental issue of public expectations. It also does not address an issue raised by Mike Pocock – namely, that use has dramatically increased in the last thirty years. Clothes are now washed more regularly rather than aired – people now shower or bathe every day where even thirty years ago many were still doing so only once a week. The balance is a difficult one. How people use their water in a domestic context should, we consider, ultimately be their choice. But this choice needs to be made on the basis of all the facts.

Reuse of water is another critical issue. This could be through many means – rainwater harvesting, grey water systems, sewer mining or more effective treatment²². Many other countries throughout the world have already progressed quite far down this road – notably Australia²³. Britain, by contrast, is lagging behind. Some of the responsibility for this lies with water companies. But governmental lead is also lacking – on a national and local basis²⁴. One thing that is clear is that the council has to take some part in these activities. One part it can play is in taking a lead on water conservation measures – not restricting use, but changing the way that it treats water. This could be through the installation of grey water systems at some

²² More details on each of these can be found in Appendix 4.

²³ See the House of Common Select Committee on Science and Technology Report on Water Management (2005)

²⁴ Currently, Ofwat’s regulatory regime provides no incentives for water companies to undertake large-scale reuse projects, or to conduct R&D to make reuse systems more effective – see Appendix 4.

sites²⁵. It could also be the more widespread use of water butts and bowsers in some parks, allowing watering to continue even if a drought order is imposed. Taking these steps would involve an initial financial outlay²⁶, but would result in substantial savings through less water use, and a more robust system that would be able to deal with temporary problems in supply, or more permanent restrictions such as drought orders.

Recommendation H: We recommend that the council take a lead in taking measures to reuse water on its property. The use of rainwater harvesting in parks is an example; the council should look at how it uses water more generally and effect a cultural change in this use, to encourage local people and businesses to do the same, thus spreading this best practice.

Finding 8: Demand (sewage)

We were disappointed that Thames Water did not provide us with any evidence in the course of this review, despite repeated requests, and repeated assurance on their part that answers to our questions would be forthcoming. However, through separate research we have been able to gather some evidence on the impact on demand of sewage and effective sewage treatment.

It is often said that water drunk in London has already been drunk by seven people, which may be apocryphal but does illustrate the importance of effective water treatment to the security of the water supply. London's sewer system, delivering effluent to treatment plants, is one hundred and fifty years old. This longevity is testament to the foresight of its Victorian designer and engineers, but the pipes' age provides unique problems which have the potential to impact upon people in the 21st century.

We have learned in particular about problems which affect the sewer system after heavy rain. London's sewers do not have separate systems for storm and foul water, which means that after heavy rain, if drains overflow they may leach effluent into the surrounding land²⁷.

We wanted to speak to Thames about these issues, and about the potential for effluent from sewers to leach into groundwater. We also wanted to speak to them about effluent reuse. In their absence, however, our findings can only justify a relatively general recommendation on this point.

Recommendation I: We recommend that the council take steps to ensure Thames Water's public accountability by continued liaison over strategic plans for enhancing the sewer system, and that plans for improvement take account of concerns over storm water and groundwater contamination.

Finding 9: Supply

Increasing supply is not currently the government's preferred way of managing water use – they have preferred to pursue demand²⁸. Supply-side solutions are, we agree, probably not

²⁵ Although we accept that there are certain circumstances where this will not be practicable. Concerns relating to the use of water by the authority and the implications of a drought order have already been raised as part of section 1 of this report. Particular issues relating to parks are raised in the "Wildlife and Environment" section below.

²⁶ Capital costs in purchasing bowsers and rain harvesting equipment would not be insignificant, although precise costs are difficult to come by as industrial or commercial harvesting systems vary in cost by requirement, and would be bespoke-designed.

²⁷ Foul water also flowed into the Thames in one incident two years ago – BBC News Online, 10 August 2004

exclusively the way forward – trying to keep pace with demand rather than reduce it is unsustainable and it does not take account of the significant climatic and geographical reasons for supply failing to outpace demand²⁹

However, there are some steps which we briefly examined which are of some interest. The construction of new reservoirs is one. Three Valleys have proposed the construction of a new reservoir at Abingdon³⁰. Thames Water also propose a reservoir in South Oxfordshire. That said, it is difficult, especially in the crowded south-east, to envisage large areas of land being made available for reservoirs, especially considering the fact that surface water stocks make up a very small proportion of available resources. Smaller schemes are in the offing, which may have more impact. For example, in some places the raising of existing reservoirs' banks to increase capacity has been proposed.

We have also discussed the construction of a national water grid. At the moment there are no plans to build a series of interconnecting pipelines to draw water from the more rainy north to the southeast³¹. A national system would most likely be costly, energy-intensive and subject to significant planning difficulties. However, we consider that there is more scope for regional connections. Three Valleys currently connect to Anglian Water. These kind of local bridges could help deal with peaks in supply and demand.

Desalination has been proposed as an option by Thames Water. A planning application for a desalination plant at Beckton has been refused by Newham Council at the direction of the Mayor of London, who considered the plant to be costly, energy-inefficient and not in keeping with a sustainable approach to water management. A desalination plan would extract water from the sea (or in this case the brackish water in the Thames Estuary) and remove the salt, rendering it safe for domestic use. A desalination plant would probably not have an impact on water in Harrow but the refusal of the application reflects the trend to consider demand issues over those of supply.

Recommendation J: We recommend that supply solutions be sought as a secondary measure, as trying to increase supply in the face of increasing demand will ultimately prove unsustainable.

Finding 10: Wildlife and the Environment

Low rainfall obviously means that watercourses will be running lower than usual and more slowly, which will affect waterborne life. Currently, Three Valleys abstracts a significant quantity of water from the Thames³², but should it apply for a drought order it would be able to abstract from elsewhere. Cross-border abstraction also has an impact – Thames currently operate under a drought order³³. Environmentally, the effects of additional abstraction do not adhere to the borders between local authorities, or between separate water companies. We are not persuaded that sufficient work has been carried out to examine how this will affect local wildlife.

²⁸ Hansard, 16 March 2006, Cols 1699-1702 outlines the general approach taken by the government.

²⁹ See "Rich Countries, Poor Water", World Wildlife Fund (2006), particularly p18

³⁰ Information on the sources of Three Valleys' water currently can be found at Appendix 2.

³¹ The Government remains sceptical – Hansard, HC Col 484 WH.

³² Precise abstraction figures are available at Appendix 2

³³ Ofwat regulations permit the drawing of water from water courses if a drought order is in operation. More details are available in the appendix.

Wildlife away from rivers is also affected. Although many trees have deep root systems, given that there has been a dryer than average last two years some species (particularly beech) may be especially susceptible.

A drought order would impose significant extra burdens. Increase abstraction from water courses could be authorised. We have been told that the surface of “fine turf” sports areas such as bowling greens or cricket pitches could be irreparably damaged if the council is not permitted to water them. Street trees would be adversely affected. Council vehicles could not be washed – not on the face of it a critical problem, but something with significant public health implications in respect of refuse lorries in particular.

Lowering of groundwater levels only exacerbates the problem – as does the continued abstraction from depleted boreholes. However, we must accept that fundamentally the continued delivery of water to customers will, in most circumstances, take precedence over the risk of temporary damage to some local ecosystems. The Environment Agency are responsible for continued monitoring in this area and will take action where there is a significant risk to the environment. This does not prohibit ongoing monitoring on a local level, however.

Recommendation K: We recommend that the council’s Biodiversity Action Plan (BAP) officer work with Three Valleys, Thames, regional authorities and the Environment Agency, along with area teams, to identify any areas or services which may be at risk as a result of the drought, or a drought order, on an ongoing basis.

Conclusion

Some of the recommendations that we have made as part of this short report relate to Three Valleys, Thames, and to partnership between these two local companies, the council and local people. We hope that Three Valleys and Thames will take these recommendations on board as part of their forward planning exercises. We are particularly aware, throughout this report, of the stringent regulations that water companies are bound to fulfil, which sometimes can appear to conflict

The challenge panel, and the evidence gathered both before and after the meeting, have enabled us to draw two overarching conclusions.

Firstly, the delivery of water is not simple for water companies. It is not as straightforward as abstracting more to cover demand, or fixing all the leaks it knows about. Water companies are private, profit-making undertakings, and decisions that they make have to be economically justified. This has led to a series of cost-benefit analyses, which have given rise to many of the popular misconceptions of the water industry. What is an “acceptable” level of leakage is one of these issues. “Common sense” would dictate that all leaks should be plugged. On the other hand, repairing all leaks would cost water companies a disproportionate amount of money, and would result in higher prices for consumers. But, again, can the public be expected to accept phlegmatically Ofwat’s contention that a leakage figure of 17% - in Three Valley’s case corresponding to a daily leakage rate of 140,000,000 litres of water – is in any way satisfactory? These are the economic and political tensions that have come to expose the shortcomings in the current national regulatory regime. Another example lies in the cost of implementing measures to manage demand. It is easy to approve of the installation of grey water systems in people’s homes, but is this really feasible when doing so means effectively replacing an entire domestic plumbing system? Again, it comes down to economic, social and environmental cost, and the value we as public bodies and consumers alike are willing to place on water as a resource.

Secondly, leading on from this, the environmental pressures are changing, but people’s expectations are not. Understandably, people expect that they should be able to turn on the tap and get cheap, clean, safe water. It has been one of the necessities of life – especially in urban areas – for at least the last 100 years. For the same amount of time, people have expected their waste water to be flushed away safely and hygienically. Essentially, people have learned not to think about water any more.

We are going to have to appreciate more and more that this approach – especially for domestic consumers – will have to change. We will have to treat water more as a precious resource that should be conserved where possible. Such an impulse may lead to the cost/benefit analysis mentioned above tipping in favour of measures to preserve water wherever physically practicable. We may have to adapt our homes and the way that we use water.

However, water companies need to take a lead in this process. Currently, they seem remote and unaccountable organisations. Three Valleys, which seems to have had success in keeping leakage down and doing all that it is legally obliged to do, has not taken any great steps in building a dialogue with the local community. This seems to be a problem common to the entire sector.

These issues have long term implications – but should be resolved soon to deal with the present situation. Often the current drought is compared with that in 1976, when water restrictions were widespread. However, the situation is very different in topographic and political terms. Topographically, we are currently experiencing a groundwater drought – a lowering of

the water table and of the water available through boreholes. The 1976 drought was a surface water drought, a more short term problem. Politically, in 1976 the country was divided up into ten regional water authorities, effectively directly controlled by central government. The command approach was obviously of great use in national water conservation measures. The industry is now a patchwork of private companies – although regulated, they are in many sense more autonomous. Although lessons can be learned from the 1976 experience, we would caution against any direct comparison as a result of these differences.

Clearly, the pressures and challenges are significant. Hopefully this report will provide a catalyst not only for further thought and discussion on this topic, but for direct action to alleviate the imminent threat of further restrictions.

Appendices

1 – Legislative information

The UK water industry was privatised in 1989. Before this date, water was (largely) controlled by a number of Regional Water Authorities (“water boards”), which themselves were created from the patchwork of local authority controlled, semi-private and sub-regional water authorities that existed before 1974.

Water Act 1989

Under the Water Act 1989, a regulator for the newly privatised companies were established, to be led by a Director General of Water Services³⁴. The Director is given numerous regulatory powers by the Act. He can set price limits, set leakage targets, and put in place financial penalties to fine companies who breach certain regulation. He also adjudicates on hosepipe bans and drought orders (see below).

The privatisation of the regional water and sewage authorities (of which there were, and are, ten) did not affect the operation of the water-only authorities, where they had been run hitherto as going concerns. Three Valleys Water was one such company. Recently it was bought by Vivendi, a French company.

Thames Water is one of the ten regional water and sewage authorities. It is owned by RWE.

There are a number of other more recent Acts which affect the water industry in this country³⁵: the following is intended to provide a brief guide, and is not comprehensive.

Water Industry Act 1991

This brought together sewerage legislation and consolidated the 1989 Act.

Competition and Service (Utilities) Act 1992

The Act applies to the regulatory bodies dealing with privatised utilities. It gave Ofwat increased powers to determine disputes and to increase competition in the industry.

Environment Act 1995

This placed a duty on the companies to promote the efficient use of water by customers.

Competition Act 1998

The Director General of Fair Trading has the main responsibility for administering this Act. The regulators for each of the utilities share this responsibility for the sectors they regulate. The Act outlaws any agreements that have a damaging effect on competition. It prohibits agreements between businesses that, or are intended to, prevent, restrict or distort competition. And conduct that amounts to the abuse of a dominant position in a market that may affect trade in the UK.

Water Industry Act 1999

The Act made several important amendments to the Water Industry Act 1991. It removed the companies' ability to disconnect household customers for non-payment of charges. It also outlawed the use of budget payment units that cut off customers' water supplies where

³⁴ At s5(1)

³⁵ Information reproduced from Ofwat Information Note No. 18 (2002), with additional data where appropriate.

customers had insufficient credit on their payment cards. It also limited the circumstances in which companies can compulsorily meter customers.

It gives the Director the task of approving companies' charges schemes. It also allows the Secretary of State to issue regulations setting out requirements that should be included in companies' charges schemes. This legislation also secured that companies were able to continue to charge customers on the basis of rateable value.

It also allows the Secretary of State to provide guidance to Ofwat on the treatment of vulnerable customers. This is set out in 'Water Industry Act 1999 – Delivering the Government's objectives', a guidance document following the 1999 Act.

2 – Introductory information on Three Valleys

Three Valleys covers a large and disparate area. It supplies over 900 megalitres (million litres) of water every day to 3.2 million customers, through 16,000 kilometres of mains.

60% of its water comes from groundwater, with the rest from surface water (reservoirs) and abstraction from the Thames (Three Valleys' region bisects the Thames). A small amount also comes from a treatment works at Bushey.

3 – Hosepipe bans and the drought order

Hosepipe ban and drought – Three Valleys have used 1997 as a basis for their drought planning³⁶. Since the hosepipe ban was brought in, consumption has dropped by around 7%, the expected level.

Drought order – Hosepipe bans forbid the use of mains-connected hosepipes by residential consumers. This includes sprinkler systems and power hoses. However, public bodies and industry are generally exempt from these provisions.

A drought order or non essential user ban, is the next level of restrictions. It means a company can apply to DEFRA for an order to prevent customers from using water in various ways (these ways are specified in the order and can differ from company to company). DEFRA then considers the application and does or does not grant them a ban. A non essential user ban covers things such as filling swimming & paddling pools, watering public parks and pitches etc. As with the hosepipe ban, there are statutory obligations re: communicating with customers that must be abided by. Three Valleys will know by the end of the year whether it will be necessary to apply for a drought order for 2007.

A drought order allows water companies to ban the use of water for the following:

- Using sprinklers or hosepipes to water gardens (apart from market gardens), lawns, verges, allotments, parks or sports or recreation grounds, whether publicly or privately-owned
- Filling privately-owned swimming pools other than for medical treatment
- Filling ornamental ponds other than fishponds
- Operating mechanical car washes
- Washing cars, boats, trains or aircraft for any reason apart from safety or hygiene
- Cleaning the outsides of buildings apart from windows
- Cleaning industrial premises or plants, apart from for safety or hygiene reasons

³⁶ This year came at the end of the 1995-1997 drought.

Using hosepipes or sprinklers to clean windows
Running ornamental fountains and cascades
Running automatically-flushing toilet cisterns during times when buildings are unoccupied

A water company can choose not to enforce any of its powers.

A drought order is also a first step to implementing other scarcity measures. In a worst case scenario, a water company can apply to Ofwat to cut off domestic supplies and order the use of standpipes – although this is highly unlikely at the moment or in the future.

Beyond the effects of a drought order, local business would probably not be affected by the current situation, although obviously there is scope for examining how businesses can become more efficient and use water more responsibly.

Beat the drought – “Beat the drought” is a publicity campaign funded and carried out jointly by a number of local authorities and water companies in the south-east. The campaign is aimed at water-saving measures in the short term, centred on changing public attitudes towards water through public events and information. The Environment Agency are also involved.

4 – Supply-side issues

Some are regional ones and others principally local (or neighbourhood-based) in nature. They are:

- 1 Grey water treatment, locally (in individual properties)
- 2 Sewer mining
- 3 Desalination
- 4 New reservoirs
- 5 Rainwater harvesting
- 6 National water grid

It has often been thought – and it was noted by the HC Select Committee report into Water Management (as supplied) – that Australia leads the field in waste management, and the SC report contains a great detail of detailed information reflecting “best practice” in the field as evidenced from activities both in Australia and the UK. Members might want to consider how this kind of “best practice” might best be used to inform current developments.

Policy 4A.11 of the London Plan (Water Supplies) states that there will be a presumption against large-scale treatment for water with the emphasis being put on methods such as rainwater harvesting.

R&D and new technology – before moving onto specific themes, the impact of new technology should be mentioned – it features heavily in the following. The stringent efficiency requirements placed upon water and wastewater service companies has meant that there has been a marked decrease in the amount of money available³⁷. Any efficiency savings made from the implementation of new technology end up being lost when Ofwat come to reassess prices in their price review every five years – making research and innovation even less attractive³⁸. Although there is nothing that the council can do about this members should bear it in mind

³⁷ Although there is a UK-wide water industry research body which carries out some innovative work.

³⁸ This was among the findings of the S&TSC’s report on Water Management.

when considered the pressures on water companies and the feasibility of large-scale efficiency savings and potential of new technology.

Grey water treatment – for the purposes of this briefing this includes rainwater harvesting. It relates to the use of water which has been used (usually in baths, showers and sinks) for other purposes – for example, watering gardens or flushing toilets.

Some steps have been taken in Harrow to promote the installation of grey water systems (they have been present in some small housing developments recently approved). Installation in older buildings (involving conversion of unified plumbing systems) would obviously be a more complicated matter, and expensive without subsidies being made available.

Sewer mining – this is another method of treatment and reuse, which is used more widely in Australia. There, private companies operate sewer mining as a profit-making concern, extracting water from sewers to treatment plants. Again, this is energy-intensive and it is uncertain whether the regulatory framework would permit it here.

Desalination – Thames Water have proposed building a desalination plant at Beckton. A planning application was refused by Newham Council at the direction of the Mayor, who considered the plant to be costly, energy-inefficient and not in keeping with a sustainable approach to water management. A desalination plant would extract water from the sea (or in this case the brackish water in the Thames Estuary) and remove the salt, rendering it safe for domestic use. The construction of a desalination plant would not have an immediate impact upon Harrow but members might want to consider to what extent

New reservoirs – the construction of new reservoirs in south east England is difficult for planning reasons and the high cost of land. However, proposals have been made. Thames are planning to construct a reservoir in Oxfordshire; South East Water in Kent have been (for some years) planning to construct a reservoir at Broad Oak. Smaller schemes are also in the offing - for example, raising the banks of existing reservoirs, which does not require additional planning permission but which significantly increases capacity.

Rainwater harvesting – the Mayor of London has mentioned rainwater harvesting as a key area for development in terms of water supply. The most obvious form of use is for water butts fed by drains in domestic properties, for use in gardens, but integration could be possible with household and business grey water schemes.

National water grid - the construction of a “national grid” for water supplies, constructed via large interconnector pipes, is something which has been frequently raised as a national response to the current drought situation. The Government remains sceptical on this point however (although they have not ruled it out), pointing out that it would be costly, energy intensive and there would be significant planning implications (in respect of pipelines)³⁹.

More likely is sub regional interconnection, allowing adjacent water companies to share supplies.

5 – Minutes of previous meeting

Three Valleys Water attended a meeting of the Environment and Economy Sub-Committee in November to provide evidence. The minutes are reproduced below.

³⁹ Hansard, HC Col 484 WH

The Sub-Committee received a presentation by Three Valleys Water, which briefed Members on the mains renewal work undertaken for the period 2005 to 2010. Members were informed that the renewal of the mains distribution network was required to reduce the incidence of burst water mains and leakage in line with OFWAT's performance targets. Work would also offer better management of resources, improved security of supply and customer service, and a reduction in emergency works and disruption. The presentation explained that the particular renewal work undertaken was targeted to achieve the maximum benefit in terms of reducing bursts and leakage; this meant focusing on the mains distribution network, though selected service pipes would also be renewed.

In the section of the presentation allocated to questions, the following points were raised:

in the case of a burst pipe on private property, it was the water provider's responsibility, and not that of the Council, to address the matter by issuing a Waste Notice and seeking payment from the owner of the property for the water wasted;

Three Valleys Water offered a 'Leakage Hotline' service to ensure leaks were reported in as timely a fashion as possible;

the map of the Borough used in the presentation to indicate the location of pipes would be beneficial for other Committees, for example the Traffic Advisory Panel;

Three Valleys Water liaised closely with the Highways Authority, and would be willing to work proactively with other utilities companies in future renewal works to ensure disruption was kept to a minimum;

OFWAT had published official guidance to govern increases in water rates.

RESOLVED: That the above be noted⁴⁰.

⁴⁰ Reproduced from official minutes of E&E Scrutiny Sub, 29 November 2005