

# Clarence Valley Council & Coffs Harbour City Council



## Regional Water Efficiency Strategic Plan



2013



# Table of Contents

<i>Mission Statement</i> .....	2
<i>1.0 Introduction</i> .....	4
<i>1.1 Background</i> .....	4
<i>1.2 Working Together: The Evolution of WESP</i> .....	5
<i>1.3 Purpose of the Plan</i> .....	6
<i>1.4 Guiding Principles – What is This Plan About?</i> .....	7
<i>1.5 Key Achievements to Date</i> .....	9
<i>2.0 The Strategic Plan</i> .....	12
<i>2.1 Our Regional Water Supply Vision</i> .....	12
<i>2.2 Our Planning Framework</i> .....	13
<i>2.3 Strategic Planning Links</i> .....	15
<i>2.4 Key Elements</i> .....	17
<i>2.5 Our Key Goals</i> .....	18
<i>2.6 Strategic Action Plans</i> .....	20
<i>3.0 Action Plans</i> .....	21
<i>4.0 Implementation and Review</i> .....	29
<i>4.1 Implementation</i> .....	29
<i>4.2 Role of Water Efficiency Team in Planning and Review</i> .....	29
<i>4.2 The Review Process</i> .....	32
<i>Abbreviations</i> .....	33
<i>Acknowledgements</i> .....	34

# 1.0 Introduction

## 1.1 Background

Action in the Clarence Valley and Coffs Harbour region to use water more efficiently on an organised scale has occurred in various forms since the 1970's. This includes the introduction of universal water metering by the former Lower Clarence County Council (LCCC) and Coffs Harbour City Council (CHCC) in the early 1980's and the introduction of user pays pricing in the late 1980's. CHCC also had to introduce other measures, such as water restrictions, early on to deal with periods of low water supply and to encourage community water efficiency.

In July 1997, the LCCC and CHCC decided to prepare the Regional Water Efficiency Strategic Plan (WESP) with a long term timeframe. A planning workshop, held in Grafton in November 1997, involved a wide cross section of our community and provided the foundation material for the Plan.

The WESP (also called 'The Plan' from herein) was prepared with extensive input from community interests, business and government agencies. The Plan was adopted by the then five councils of the Clarence Valley and Coffs Harbour City Council. Amalgamation of the Clarence Valley councils occurred in 2004 to form Clarence Valley Council. Prior to amalgamation LCCC had adopted a trading name "North Coast Water" and this trading name was retained for a business unit of Clarence Valley Council undertaking the previous LCCC functions. North Coast Water ceased to exist as a business unit in 2009, and all water supply and sewerage functions are managed by Clarence Valley Council's Water Cycle section. Coffs Harbour Water was established in 2002 as the water and sewerage business unit within CHCC and continues to manage these services for residents in the Coffs Harbour LGA today.

The Plan is one of two key parts of the Regional Water Supply Strategy (RWSS) being implemented by Clarence Valley and Coffs Harbour City Councils, the other being construction of a major water storage facility at Shannon Creek, west of Coutts Crossing, filled from the Nymboida River catchment and interconnecting pipelines. Water efficiency, as a major strategy, plays a vital role in reducing the need for a much larger water storage facility than the 30,000ML Shannon Creek Dam. The Plan was established to cover a fifty year time period to 2046. It has now been in place and operating for the first fifteen years of this period. It is a real commitment to a more ecologically sustainable future in the way we use and manage water in the region. It is a framework for a range of key action plans, which address how we gain and use water.

The WESP was reviewed in 2006 as part of the Plan's aim to remain both effective and relevant. A team of people representing community, councils and government stakeholders carried out the review. They considered the range of achievements to date and identified future challenges. They confirmed the Plan's intent and updated its action plans in line with current, and future needs.

The Water Efficiency Team (WET) continues to engage community interests alongside council and government agency representatives. Regular meetings are held to review the progress of implementing the water efficiency strategies and to provide community direction.

This 2013 Plan is an updated version on the WESP (1998) and the WESP (2006), developed by Sustainable Futures Australia.

## **1.2 Working Together: The Evolution of WESP**

Community involvement and consultation has been, and remains a key driver and an important outcome of the Plan. This ranges from being part of decision-making and review, to being encouraged through education and awareness to embrace water efficiency and sustainable behaviours. From the beginning, the Plan has been developed from community effort and support, and is reviewed with community input. This input involves a wide range of representative interests, willing to work together. Ongoing and comprehensive community involvement is a hallmark of this Plan.

- 1996 – Community Advisory Group (CAG) established by Lower Clarence County Council to review proposals, discuss issues and provide input to water storage planning for the region
- 1997 – Community-driven strategy sought, so planning workshop held with 37 community representatives who identified the key aspects of the strategy
- 1998 (early) – Draft Plan produced by smaller CAG working group, then further input from CAG as a whole to ensure community approval and acceptance
- 1998 (mid) – Draft on public exhibition for wider community review
- 1998 (late) – Plan adjusted according to community input and adopted on 5<sup>th</sup> August. Resources then allocated for preparation and delivery of Implementation Plan.
- 2001 – North Coast Water and Coffs Harbour City Council appoint respective Water Efficiency Coordinators to take an integrated approach to implementing the Plan, particularly the education and demand management elements
- 2001-2006 – Water Efficiency Team (WET) formed from the CAG held regular meetings to review progress of implementing the water efficiency strategies and provide community direction for future strategies.
- 2006 – Review workshop involving community, Council and government agency representatives to update the progress to date on action plans and strategic intent of the Plan. Participants acknowledged the completed actions and developed a range of new actions alongside those which were ongoing.
- 2007 – Revised WESP adopted by both Clarence Valley Council and Coffs Harbour City Council.
- 2009 – The build component of the RWSS, including Shannon Creek Dam and the associated pipelines, completed. The major “build” component of the Regional Water Supply Strategy relies for its longevity on the success of the WESP. Shannon Creek Dam is projected to supply water until 2021, or an extra 25 years to 2046, with effective water conservation.
- 2007-2012 – WET meetings continue to review implementation progress and provide direction from the community.

## **1.3 Purpose of the Plan**

### **Aims**

The purpose of the Plan is to develop and support an ongoing co-operative approach and range of integrated actions to use and manage water in an ecologically sustainable manner in our region. In this regard there are a number of interrelated and important aims that the Plan is seeking to achieve. These aims are:

- 1. Effectively co-ordinate water efficiency programs and actions for Council, community, and government agencies.**
- 2. Manage water efficiently and carefully from its supply sources, to its return to the natural environment.**
- 3. Reduce reliance on water from rivers, by using existing and emerging technologies for improving water efficiency.**
- 4. Encourage a water saving and resource conservation ethic in the community through education, information programs and participation.**
- 5. Utilize pricing and regulatory mechanisms to reduce and manage the demand for water especially during dry periods.**
- 6. Make sure the Shannon Creek dam and pipelines designed for the estimated demand for year 2021, when combined with other sources and demand management, will provide a safe and secure supply until at least year 2046, and beyond.**

## **1.4 Guiding Principles – What is This Plan About?**

### **➤ Our ongoing Commitment**

An essential part of this Plan is having ongoing commitment from all key stakeholders. Councils cannot achieve all the goals of this Plan alone. The Plan requires and promotes a committed co-operative approach from the local councils, state government, industry and business, residents and communities of the region.

### **➤ Effective partnerships**

This Plan is about the Councils continuing to work together and helping to create and foster partnerships, so that we share the responsibilities, costs and benefits of wise water use and management. These partnerships have been effective to date and they are vital to enable the collective value of our knowledge, ideas, viewpoints and experience to be brought to bear on future challenges.

### **➤ Expanding our future options**

Broadening our attitudes to using and managing water, including the range of water sources we might be able to use, gives us greater adaptability and flexibility for the future. In the face of the challenges of this changing world, we need to be open to opportunities which previously we may have disregarded, and emerging technologies once seen as unworkable. We need to encourage and value creative ideas as well as the rational process of investigating and evaluating them.

### **➤ Real community involvement**

Real involvement relies on having a range of meaningful opportunities to participate in planning and creating the future. This Plan encourages ongoing community involvement to help identify issues and challenges, to create and explore options, to help decide on courses of action, and to evaluate progress towards our agreed goals, and keep abreast of what's happening.

### **➤ Educating ourselves and expanding awareness**

We need to learn more about water, and ways to better manage our use of this valuable resource. A key to this is learning to understand water and its myriad of values. We need to understand how our community presently uses water, how to manage water use in an ecologically sustainable way, and what measures are acceptable to the community. We need to look nationally and globally for examples of best practice and see if they can apply to us. We need to share our challenges and successes. It is important to educate our children and youth, as they are consumers and decision-makers of the future.

### **➤ Healthier rivers and catchments**

Our methods and rates of water extractions from rivers to serve large populations have environmental impacts. We are finding out what these are and working out ways to rectify and avoid them. A key part of this is designing our extraction to maintain appropriate environmental flows in our rivers and waterways throughout seasons, whilst ensuring a reliable water supply to our residents. We are investigating and implementing emerging technologies, which can reduce our dependence on rivers for urban freshwater use, for example, re-use of reclaimed water and stormwater run-off. Achieving and maintaining healthier rivers also means good water quality for our use. Our careful management of river catchments is vital to

water quality. Sensible management will result in a wide range of environmental, social and economic benefits.

➤ **Health of our communities**

Good water quality for the environment also means good water quality for drinking and other potable uses. We need to keep our water supply as natural as possible to ensure our drinking water meets health standards. In applying alternative supply options, like using rainwater tanks, we need to minimise potential health risks from poor management. This Plan provides for emerging technologies and ongoing education to play important roles in maintaining good quality natural water for our use and for future generations, as well as protecting the environment.

➤ **A Coordinating Strategy**

This Plan is not meant to set out all the detail about saving water, protecting river catchments, which technologies to use, or how we should work together. Rather, this Plan maps out our general direction, providing some certainty about where we are heading – ecologically sustainable water use and management – whilst providing the flexibility for us to adapt to conditions along the way.

**Where to Now?**

This Plan establishes a clear pathway to more ecologically sustainable water use in our region. It is up to us: our community, Councils and government agency stakeholders to keep searching for practical solutions and to make the necessary changes that benefit us, future generations and our environment.

## **1.5 Key Achievements to Date**

Since the adoption of the original WESP in 1997, Clarence Valley and Coffs Harbour City Councils and our communities have achieved some major milestones and actions in sustainable water management.

### **➤ Efficient water consumption**

Regular reporting to state government agencies show that Coffs Harbour City and Clarence Valley LGA households are among the most water efficient in NSW, without being on the severe water restrictions of some other Councils with comparable household consumption. Water use data indicates that there has also been a consistent reduction in both household water use and total water supplied over the past decade.

### **➤ Partnerships**

Clarence Valley and Coffs Harbour City Council are working together in partnership with a number of organisations. Ongoing relationships currently include the Waterwise Schools coordination committee, the Water Efficiency Team, and North East Water Efficiency (NEWE). Both councils have an ongoing partnership with the Savewater Alliance and the Cascade Environmental Education Centre (NSW Department of Education). Liaison with other water authorities and government agencies occurs as opportunities arise.

### **➤ Public education programs**

Public awareness is maintained with a wide range of public education programs using various media. These include advertising campaigns, website information, water bill inserts, newspaper articles, competitions, bus shelter advertising, talks to interest groups, and dam tours. National Water Week in October and World Water Day in March are an annual focus of promotional activities. Water efficient demonstration gardens have also been established in both councils to encourage waterwise gardening.

### **➤ School education programs**

The “Waterwise Schools” program has been running since 2007 and more than 40 schools have been trained and accredited. This represents the majority of primary schools in the Coffs Harbour and Clarence Valley council areas. Dam and treatment plant tours are also run on demand for schools. The Waterwise Schools program is a cooperative project between several North Coast councils and the Cascade Environment Centre run by the Department of Education. The Department of Education employs professional staff to continuously work with schools in the region.

### **➤ Water audits for high water users**

Most high use commercial industries and caravan parks have been water audited in the past. There has been varying levels of success, depending upon the commitment of management and staff to water use efficiency.

### **➤ Rebates and incentives**

Each Council area autonomously manages their own respective rebate programs. In CVC, there are ongoing tank and dual flush toilet rebate programs and showerhead exchange programs.

CHC continues to offer a dual flush toilet rebate and showerhead exchange and showerhead rebate programs.

➤ **Water pricing mechanisms to reduce water demand**

Best practice pricing including an inclining block tariff and a price path has been adopted following a community consultation process.

➤ **Permanent level 1 water restrictions**

There are permanent level 1 water restrictions in place in both Coffs Harbour and Clarence Valley Council areas.

➤ **Re-use of water**

Both Councils are strongly committed to using reclaimed water, not only to replace the use of potable water extracted from the natural environment, but also to reduce the release of reclaimed water back into the natural environment. Both councils have assessed opportunities for water reuse, and implemented programs in viable locations. Most current sewerage capital works programs have major re-use elements integrated into them and there is substantial re-use of water by golf clubs, sporting fields, open space, schools and industry in both Council areas. Dual reticulation water services have also been incorporated into several new sewerage infrastructure projects in CVC.

➤ **Pressure reduction, leak detection, and telemetry**

Leak detection and pressure reduction aims to reduce water losses from water supply systems by monitoring and adjusting the water pressure in mains. It's a proven technique adopted by many water supply authorities, which saves millions of litres of water by reducing leakage. It also reduces damage to water infrastructure from high pressure. Water pressure reduction has occurred in viable locations and further opportunities are being assessed. Both Clarence and Coffs Harbour have also recently carried out leak reduction programs along council pipelines. Telemetry has been implemented in both council areas to allow automatic detection of system leaks and facilitate fast repairs.

➤ **Links**

Since the inception of WESP, Commonwealth and State legislation has supported water efficiency. The programs and requirements flowing from these initiatives, have been taken up by our local communities. For example, the Water Efficient Labeling Scheme (WELS) was brought in by the Commonwealth government to allow consumers to see how water efficient the products were that they were purchasing. The Building Sustainability Index, or BASIX, was introduced by the NSW State government, which mandated that all new homes, and existing homes undergoing major renovations should reduce their household water consumption by 40% against the state average and the Residential Tenancies Act 2010 mandated water efficiency improvements in rental housing.

## Awards

The WESP and Regional Water Supply Scheme have helped earn the Councils major accolades from various government and industry bodies since the last review in 2007. These include:

**1998** - *NSW RAPI Award for Excellence in Community Planning* to Sustainable Futures Australia and Lower Clarence County Council for the Regional Water Efficiency Strategic Plan: Coffs Harbour and Clarence Valley.

**2000** - Gold level award from Rivercare Australia.

**2007** - *Excellence in Environmental Management Award*, presented by the United Nations Association of Australia for a range of environmental management projects undertaken by CHCC, including the Coffs Harbour Water strategies for reclaimed water and the Regional Water Supply Scheme.

*Commendation – Water Saving – National Awards for Local Government*, presented by Commonwealth Department of Infrastructure, Transport, Regional Development and Local Government for Coffs Harbour Water Reclaimed Water Strategy.

**2008** - *Merit Award – Corporate Sustainability in Local Government*, presented by Local Government Managers Australia for a range of environmentally sustainable initiatives undertaken by CHCC, including the Coffs Harbour Water Strategies for water quality, water efficiency, reclaimed water and enhanced sewage treatment systems.

**2009** - *Building NSW Regions Award*, presented by Local Government Managers Australia for being the most proactive Council in NSW for building regional communities in 2008/2009, specifically the Coffs Harbour Water Projects: Regional Water Supply Scheme, Water Reclamation Plant and Water Filtration Plant.

*Engineering Excellence Award*, presented by Engineers Australia for Shannon Creek Dam and the Regional Water Supply Scheme.

*Engineering Excellence Award – Innovation in Water and Wastewater*, presented by Institute of Public Works Engineering Australia NSW for the Regional Water Supply Scheme and Shannon Creek Dam.

*NSW Water Industry Award for Infrastructure Construction*, presented by Australian Water Association for the Regional Water Supply Scheme partnership between the NSW Government, Clarence Valley Council and Coffs Harbour Water.

**2010** - *Project Innovation Award*, presented by International Water Association for the Regional Water Supply Scheme and Shannon Creek Dam.

**2011** - *Water Conservation Award (Joint Winner)* – Excellence in the Environment Awards, presented by Local Government and Shires Association for NSW for the Water Loss Management Program.

## 2.0 The Strategic Plan

This WESP is a framework for creating, implementing and coordinating a range of measures over a long time period to achieve the healthy and secure water supply our communities have advised they want. This section sets out the working part of the strategic plan. The key aspects of Plan are shown below.

### 2.1 Our Regional Water Supply Vision

*“Use and manage our water in an efficient and ecologically sustainable manner”*

#### Our Approach

Our Vision will be achieved through:

- maintaining and enhancing healthy rivers and waterways
- cooperation and coordination of all stakeholders
- timely implementation of cost effective and equitable programs
- developing community awareness
- monitoring and reporting progress and taking actions for continuous improvement
- implementing total water cycle planning and decision-making.

#### Our Commitment

Clarence Valley and Coffs Harbour City Councils will:

- actively engage all levels of government
- play a leadership role in working in partnership with the community
- promote appropriate existing and emerging technologies
- ensure our water management enables people now, and in the future, to have a secure, good quality water supply and healthy environment.

## **2.2 Our Planning Framework**

This Plan is a framework for creating, implementing and adjusting a coordinated range of measures and programs, implemented in a prioritised manner over a long time period. The framework has helped us work together to identify what we ultimately want to achieve, a range of the ways to go about it, and how best these ways can be combined together in our actions.

### **The Strategic ‘Planning Web’**

The Plan is designed as an integrated web of goals, strategies and actions to achieve a specific Vision for the future. Clarence Valley and Coffs Harbour City Councils, in cooperation with the wider community, have established a vision for the Plan. This vision is our central focus, supported by the Planning Web approach. Key Goals have been identified together by the councils, community and other key stakeholders. These goals, based on the values and challenges associated with the vision, surround and focus on the vision, establishing anchor points to help create a strong web of strategic actions. The goals reflect the key aims of the water efficiency strategy, and can be linked outwardly from the Web to similar broader regional, national and global goals of sustainability and efficient water resource management. Each goal has a number of issues and tasks to address through Strategies with a range of Actions to meet these challenges and achieve the goal. Many of these are required to be carried out successfully to achieve a number of the other goals, showing how interlinked they are.

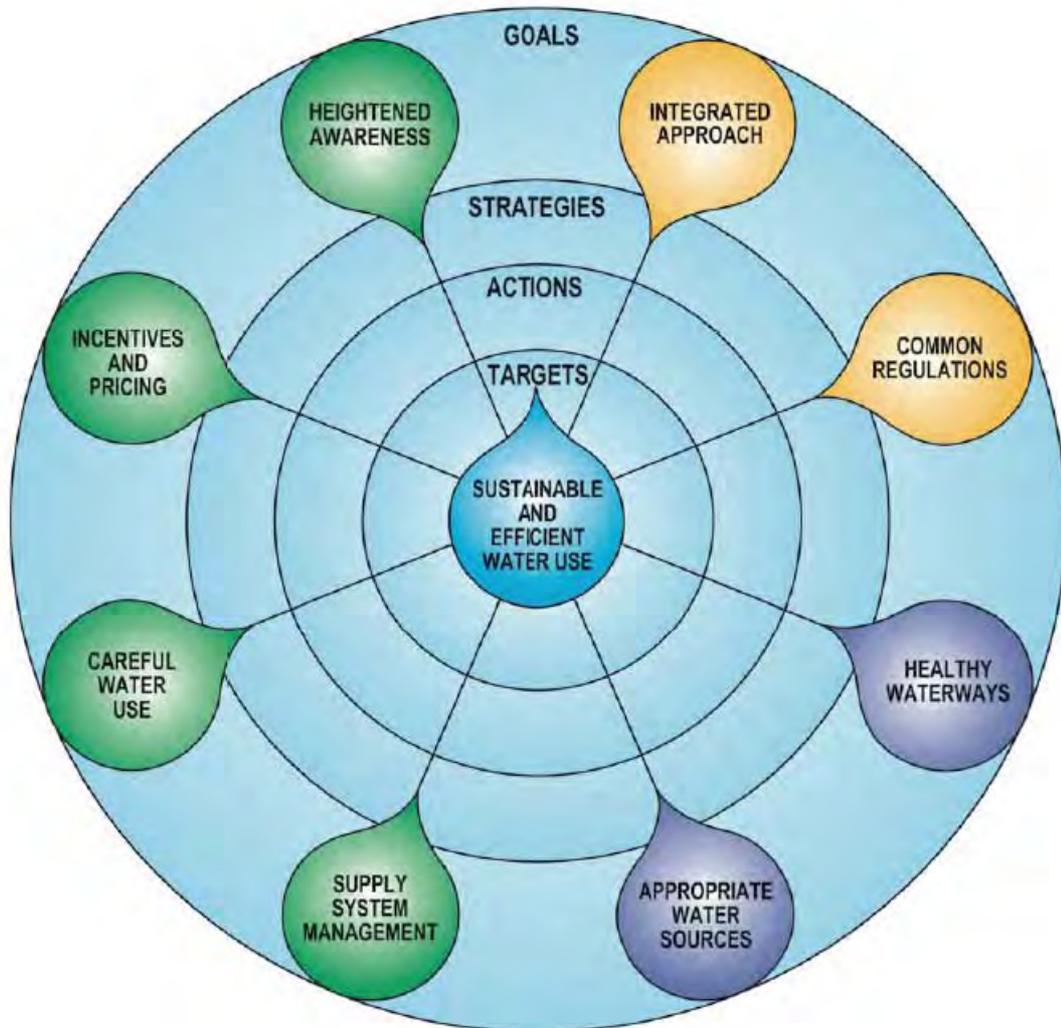
These goals are grouped into three key Elements of the strategic plan, the main planning and management areas, where strategies and actions are required and our performance and progress needs to be measured in order to achieve our vision.

The key elements of the strategic plan which are:

- (1) Institutional and Regulatory Arrangements
- (2) Water Source Management Goals
- (3) Water Demand Management Goals

Targets, Priorities and Timelines can be set for the strategic actions to help us meet the goals, and measure our success in achieving our vision. Woven together these strands establish the integrated Planning Web. A number of Guiding Principles have been adopted to use in our planning and decision-making, as well as consider when we are carrying out actions, to help weave a strong Web. The Planning Web, however, is only as strong as its weakest strand. It reminds us that all goals are important to achieve, and therefore all actions. We should seek to successfully put into place the strategies and actions proposed for each goal, as well as review them. Over time, new tasks and targets will be set reflecting our learning and changing awareness and views, as well as new ideas and ways of thinking, and the long-term nature of the Plan.

## The Regional Efficiency Strategic 'Planning Web'



-  REGULATORY AND INTEGRATED APPROACH
-  WATER SOURCE MANAGEMENT
-  WATER DEMAND MANAGEMENT

## 2.3 Strategic Planning Links

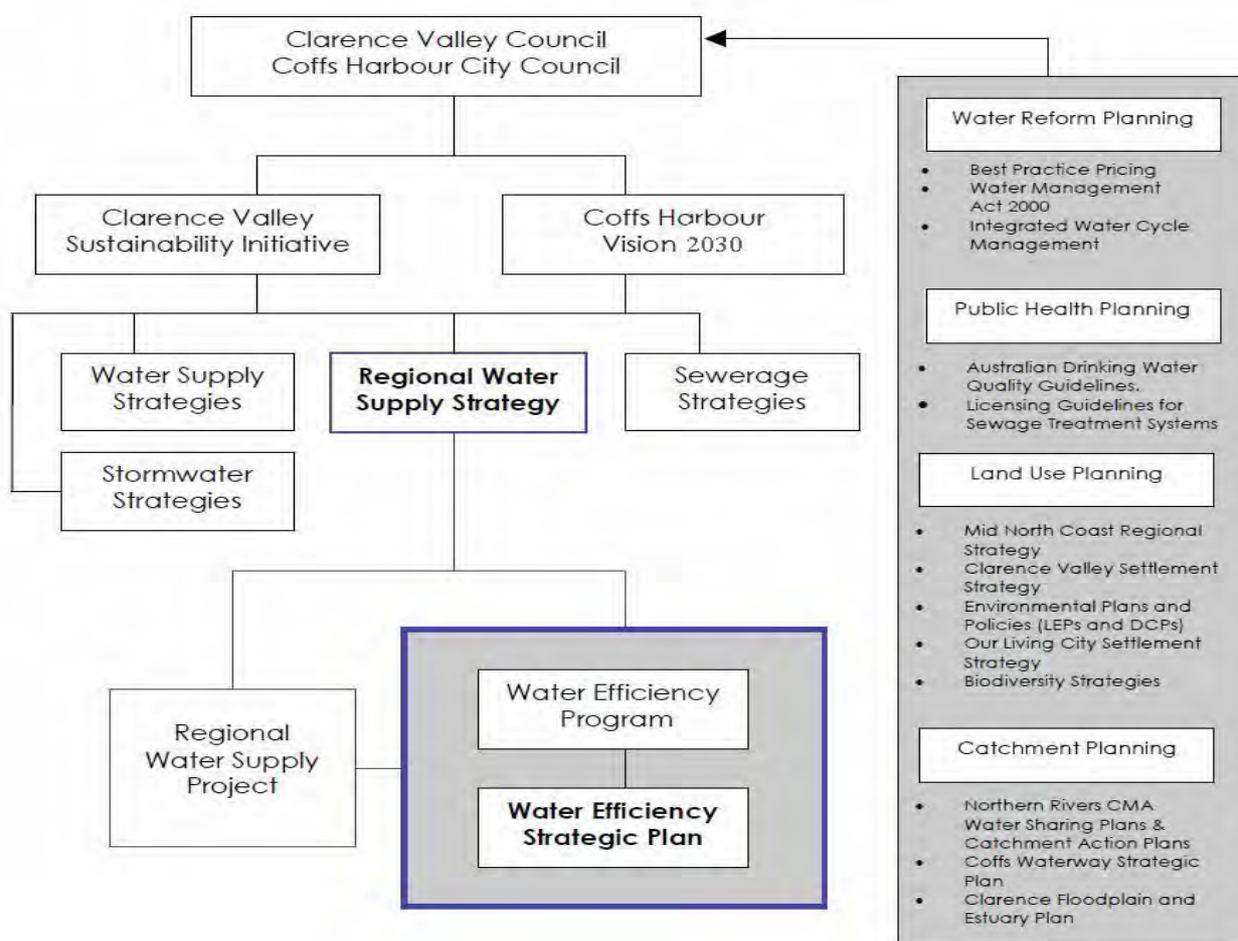
The Plan is a major part of the Regional Water Supply Strategy (RWSS), which has two integrated parts:

- the built component: the Regional Water Supply Project, including the Shannon Creek water storage facility and associated pipelines
- the non-built component: the Water Efficiency Program

Our WESP is a key aspect of the Councils' strategic planning frameworks including helping work towards achieving major council/community aims and goals in their respective long term strategic plans and guiding documents, such as Clarence Valley Council's Sustainability Initiative 'Our Heritage, Our Lifestyle, Our Future', and Coffs Harbour City Council's Vision 2030. The Plan is also directly linked to other Council strategic plans such as the sewerage and wastewater management strategies, and a number of land-use plans, planning instruments and development guidelines.

Sustainable water management not only has a high priority in our region, but also across the state, nationally and on a global level. This Plan needs to be linked to a range of relevant planning initiatives from the global to regional level.

The flowchart on the next page shows how the WESP, prepared as part of the Water Efficiency Program, fits into Clarence Valley and Coffs Harbour City Council strategic planning frameworks, and links to relevant key aspects of state government policy and planning.



## **2.3 Guiding Principles**

Identified as vital to always be considered in developing and implementing the Plan, these five guiding principles form the basis of our long-term thinking and are core aspects that need to be considered in all our decisions and actions taken to help achieve our goals.

### **1) Sustainability**

We must ensure that the water we need is harvested and used without detrimental impact to other lifeforms and ecosystems. The costs, benefits and responsibility for managing our water need to be shared equitably by all users. We have a responsibility to ensure future generations have access to quality water supplies and a robust natural environment, and that wherever possible we enhance these.

### **2) Integrated water cycle approach**

We must plan for and manage our urban water supply, knowing it is part of the total water cycle. Our harvesting and use of water needs to ensure it will be recycled, both by us and back into the natural environment. Maintaining good water quality and near natural environmental flows in our rivers are critical aspects to always consider and work towards achieving.

### **3) Community involvement and partnerships**

The success of the overall program depends on active and meaningful community involvement and productive partnerships between government, community interests and water users. The whole community needs to accept and understand the responsibility for using and managing water in an ecologically sustainable manner.

### **4) Recognising influences and constraints**

It is important in advance to identify constraints and influences which could limit, or enhance, effective, efficient and ecologically sustainable water use and management practice, and to incorporate measures and account for them in supply design, use and management programs.

### **5) Performance evaluation, feedback and review**

We need to monitor and gain feedback on our performance in aiming for targets and meeting agreed timelines to implement programs. We need to review this Plan and its implementation to make sure we are on track, to see if strategies need adjusting and, where necessary, establish new actions. Partnerships need review to see if they are working effectively, and whether new ones can be established. We need to make sure our actions reflect community views and values.

## 2.4 Key Elements

The main aims of the Plan relate to the three key elements: (1) institutional and regulatory arrangements, (2) water supply management, and (3) water demand management. These are the main outcome areas where change needs to occur to become more efficient with our water use and to establish an ecologically sustainable management approach. Strategies and actions to meet the goals of the Plan are therefore focused on these three key elements.

### 1) Water Source Management

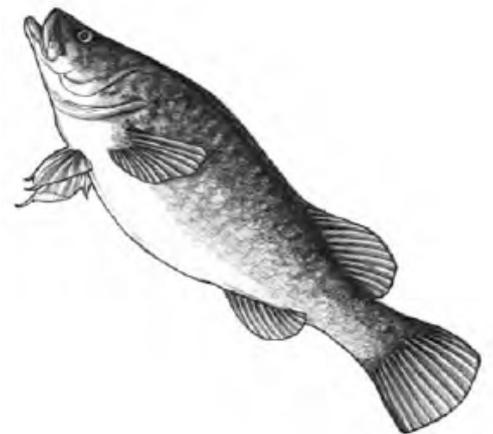
Currently the region relies on surface water supplies from the Orara and Nymboida Rivers as the almost exclusive sources of water for our urban communities. These sources need to be carefully managed so that water quality is the highest standard for human consumption. Water extraction must have a minimal impact on the river environment. Other supply sources and better technologies need to be identified such as stormwater, reclaimed water and grey water re-use, and rainwater tanks.



### 2) Water Demand Management

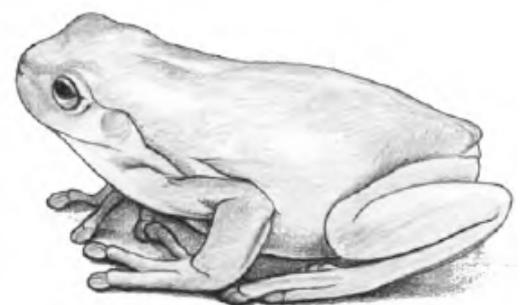
People use water in many different ways. Demand management is about encouraging use of water of a suitable standard, as efficiently as possible for the task required. It involves a range of measures including:

- changing our everyday practices
- using best and most cost-effective technology
- suitable pricing and incentives
- changes to council's policies and building codes
- education programs and continuing awareness.



### 3) Regulatory and Integrated Approach

Regulatory arrangements include changing and updating relevant planning and building regulations. This ensures that new buildings, and older buildings that are retrofitted/redeveloped are as water efficient as possible. An integrated approach involves forming partnerships with all service providers and planning and building regulators in the region, to facilitate a coordinated approach to urban water-cycle management.



## **2.5 Our Key Goals**

The Plan has eight key goals. These goals reflect the main concerns of our community in managing our urban water supply system. They all need to be achieved to help create an ecologically sustainable water supply and management system. Connected together by strategies and actions they create an integrated approach, which will help achieve our regional vision.

### **Goal 1 A Cooperative and Coordinated Regional Approach**

Clarence Valley Council and Coffs Harbour City Council commit to working co-operatively with each other and other key stakeholders, in an integrated regional approach implementing the Plan and its actions.

### **Goal 2 Common Regulatory Measures for Efficient and Careful Water Use**

Adopt and implement council regulations and policies that maximise the effectiveness of regional councils in achieving efficient and sustainable water use and management.

### **Goal 3 Helping Enhance Health of Rivers and Waterways**

Implement programs that monitor the health of the Nymboida and Orara Rivers and their catchments, to assist in minimising or ameliorating impacts on river health and support a healthy and secure water supply system.

### **Goal 4 Cost Effective and Environmentally Appropriate Water Sources**

Identify appropriate water sources through gauging the attitudes of an informed community towards water source issues, so that a wide range of acceptable and appropriate water sources can be identified for inclusion in the water supply strategies prior to 2021.

### **Goal 5 Effective and Efficient Management of Water Supply Systems**

We work towards increasing ecologically sustainable operational practices through management processes that assess, monitor and minimise water losses from leakage and overflows, ensure effective water metering and restrictions to minimise inappropriate water use in times of drought, and maximise efficiency of our supply operations.

### **Goal 6 Consumer Water Use is Efficient and Environmentally Sound**

Develop and implement a range of approaches such as pricing policies, education programs, research on community attitudes to water, and specific planning such as matching water sources to suitable uses, and introducing new technology or better ways of providing water supply whilst using less water.

### **Goal 7 Incentives and Pricing Policies Support Efficient, Environmentally Sound Water Use**

A common, well-understood approach for water pricing supports creation of a range of incentives that are effective in having people use water more efficiently and sustainably.

### **Goal 8 A Heightened Awareness For Efficient and Careful Water Use**

We focus on our community having a better understanding of efficient and ecologically sustainable urban water use, supporting and reviewing actions in the Plan, resulting in greater community awareness and helping to meet the other goals of the Plan.

## ***2.6 Strategic Action Plans***

A range of action plans set out tasks to deal with important strategic issues that have been identified. These action plans include strategies and actions focused on achieving the goals. Key partnerships are identified to oversee or provide the leadership for the strategies and actions. Timelines and priorities are identified for each action and task. These actions and their implementation may need to be adapted due to changing circumstances, and further agreed tasks may be added at any time.

### ***2.6.1 Local Context for Strategic Action Plan Implementation***

The Regional Water Supply Scheme (RWSS), including the WESP, is an excellent example of regional cooperation between Coffs Harbour and Clarence Valley Councils, to ensure security of water supply for residents of both areas. On all other governance matters, the two local councils retain autonomy from each other in all respects. This partnership provides the foundation for the build and non-build components of the RWSP. It also allows for some flexibility in individual priorities for each respective Council, specifically with regard to the non-build strategies in the WESP. The value in retaining this avenue of flexibility is that it allows each Council to integrate the WESP with other relevant plans, policies or initiatives that may be in place.

## 3.0 Action Plans

The following strategic action plans represent ways to move towards achieving the goals of our integrated planning approach. In relation to each **goal** the following objectives are considered in developing the strategies and actions:

- identify key issues and challenges and seek possible options and solutions to them
- develop an approach to plan, carry out and manage the required actions.
- identify and involve key players and stakeholders.
- establish a suitable process of review and evaluation to learn from experience and when necessary, adjust for better outcomes.

In relation to each **strategy** and its key actions the following aspects have been identified to help choose and implement them at the right time:

- having in place key partnerships that will assist in carrying out the actions,
- the considered priority of the actions in relation to each other,
- including matters such as sense of urgency, resources available, and potential/actual partnership support
- the proposed or likely timeframe that is outlined for carrying out the actions, within the context of the life of this Plan.

### Priorities

**High = HP** of critical importance to the immediate success of the Plan

**Moderate = MP** would benefit the immediate success of the Plan, but not presently essential

**Low = LP** not presently essential to the immediate success of the Plan

**Uncertain = U** requires more detailed investigation, or consideration, as its priority and/or the importance is not presently known

**Note:** These priorities may change due to changing circumstances which may result in a review, and adjustment.

## Goal 1: A cooperative and coordinated regional approach.

Strategies Key	Actions	Partnerships	Priority	Timeframe
<b>Strategy 1.1</b> Monitor new opportunities not previously considered in the Montgomery Watson Report.	<b>Action 1.1.1</b> Actively pursue water recycling and re-use opportunities	Participant businesses and communities	HP	Ongoing
	<b>Action 1.1.2</b> Partnering with private industry to reduce water use.	CVC/CHCC Businesses and industry	MP	Ongoing
	<b>Action 1.1.3</b> Deliver Waterwise Schools Program	CVC/CHCC/Dept.E&C – Cascade Environmental Education Centre	HP	Ongoing
	<b>Action 1.1.4</b> Engage with other water authorities on a Regional basis	CVC, CHCC and Kempsey Shire Council NEWE Councils	HP	Ongoing
<b>Strategy 1.2</b> Implement and monitor relevant mandatory and voluntary guidelines	<b>Action 1.2.1</b> Implement & monitor (eg BASIX, Water Sensitive Urban Design, Plumbing and Drainage codes, Water Efficient Labeling Scheme, NABERS Home & Office)	CVC / CHCC Participant Agencies	MP	Ongoing
<b>Strategy 1.3</b> Maintain community input and consultation	<b>Action 1.3.1</b> Maintain annual meeting, reporting and feedback with WET	CVC/ CHCC Participant community groups and individuals	HP	Ongoing

## Goal 2: Common regulatory measures for efficient and careful water use.

Strategies Key	Actions	Partnerships	Priority	Timeframe
<b>Strategy 2.1</b> Build on existing partnership between constituent Councils to develop water efficiency through an efficient planning, building and approvals process.	<b>Action 2.1.1</b> Monitor and review permanent Level 1 water conservation measures	CVC/CHCC	MP	Ongoing
<b>Strategy 2.2</b> Review and update the Regional Water Efficiency Strategic Plan and Implementation Plan.	<b>Action 2.2.1</b> CVC and CHCC jointly upgrade WESP every 5 years	CVC/CHCC	MP	Update due - 2018
	<b>Action 2.2.3</b> Release updated WESP for public exhibition	CVC/CHCC	MP	2018
<b>Strategy 2.3</b> Adequately resource the Water Efficiency Team meetings and input into the WEIP including progressive review of WESP implementation	<b>Action 2.3.1</b> Provide relevant administrative support for the annual meeting in a timely manner	CVC/CHCC	MP	Ongoing
<b>Strategy 2.4</b> Create and use existing Frameworks, policies, Development Control Plans and Strategies to implement water efficiency	<b>Action 2.4.1</b> Integrate water efficiency into policies and mechanisms eg. IWCM, re-use schemes. The CHCC 'Vision 2030' and the CVC 'Sustainability Initiative'	CVC/CHCC	MP	Ongoing

## Goal 3: Helping enhance river health.

Strategies Key	Actions	Partnerships	Priority	Timeframe
<b>Strategy 3.1</b> Implement the water extraction plan for the Nymboida River in accordance with Shannon Creek licencing.	<b>Action 3.1.1</b> Work in partnership with the river monitoring committee to enhance river health.	CVC/ CHCC	HP	Ongoing

## Goal 4: Cost effective and environmentally appropriate water sources.

Strategies Key	Actions	Partnerships	Priority	Timeframe
<b>Strategy 4.1</b> Collate & report on any relevant information on community attitudes & a range of alternative water sources (eg. recycled water, stormwater harvesting, desalination)	<b>Action 4.1.1</b> Participate in relevant community consultation opportunities and forums. Attend relevant conferences and report findings and information	CVC/ CHCC	LP	Ongoing
	<b>Action 4.1.2</b> Undertake ongoing community surveys if appropriate	Appropriate Organisations (eg AWA, NEWE, savewater)	LP	Ongoing
	<b>Action 4.1.3</b> Monitor regulatory requirements for recycled water and investigate new opportunities.	CVC/ CHCC NSW Gov't	MP	Ongoing
<b>Strategy 4.2</b> Monitor technological changes and modify implementation plan as required.	<b>Action 4.2.1</b> Where practical ensure capital works programs reflect technological changes and try to adapt to new changes, eg. grey water, recycled water, pressure reduction etc.	CVC/ CHCC	MP	Ongoing
<b>Strategy 4.3</b> Explore and identify opportunities for integration within an urban water management plan.	<b>Action 4.3.1</b> Review ICWM plan	CVC/ CHCC/ DWE	MP	Ongoing

## Goal 5: Effective and efficient management of water supply systems.

Strategies Key	Actions	Partnerships	Priority	Timeframe
<b>Strategy 5.1</b> Complete leakage assessment studies to assess leakage.	<b>Action 5.1.1</b> Conduct ongoing reservoir drop tests and/or water balances	CVC	LP	Ongoing
<b>Strategy 5.2</b> Complete a pressure survey to assess possible leakage reduction possibilities through pressure reduction.	<b>Action 5.2.1</b> Undertake active leakage detection programs	CVC/ CHCC NSW Government	MP	Ongoing
	<b>Action 5.2.2</b> Assess pressure reduction opportunities	CVC/CHCC	MP	Ongoing
	<b>Action 5.2.3</b> Complete NOW Annual Performance Reports	CVC/CHCC/NOW	MP	Annual
<b>Strategy 5.3</b> Implement metering program	<b>Action 5.3.1</b> Maintain meter exchange program, include Fire service metering and ensure meter calibration	CVC/ CHCC	MP	Ongoing
<b>Strategy 5.4</b> Investigate alternative methods to reduce flushing of mains	<b>Action 5.4.1</b> Investigate new technologies for mains flushing (eg ice pigging, air scouring) and use of recycled water for fire fighting hydrants (dependant on State Government health legislation)  Estimate costs/ benefits	CVC	LP	Ongoing CVC  Complete CHCC (Filtration in 2009)
<b>Strategy 5.5</b> Utilise modern technology to reduce maintenance and leakage losses.	<b>Action 5.5.1</b> Locate and repair leaks as soon as possible	CVC/ CHCC	MP	Ongoing
	<b>Action 5.5.2</b> Use Telemetry to assess leakage on a daily basis	CVC	LP	Daily
<b>Strategy 5.6</b> Apply restrictions as per policy and licence dependent upon Nymboida River flows	<b>Action 5.6.1</b> Maintain permanent water conservation measures	CVC/CHCC	LP	Ongoing
<b>Strategy 5.7</b> Carry out secure yield review for forward planning	<b>Action 5.7.1</b> Monitor yield and forward plan accordingly including impact of climate change	CVC/CHCC	MP	Ongoing

## Goal 6: Consumer water use is efficient and environmentally sound.

Strategies Key	Actions	Partnerships	Priority	Timeframe
<b>Strategy 6.1</b> Implement a community education program	<b>Action 6.1.1</b> Use advertising, website newspaper articles, dam tours, letter drops, events, awareness campaigns etc.	Savewater, CVC/CHCC	HP	Ongoing
	<b>Action 6.1.2</b> Carry out market research and undertake surveys & review programs using Community Based Social Marketing (CBSM) where appropriate	AWA, local media, Savewater	LP	Ongoing
	<b>Action 6.1.3</b> Provide transparent information to the public on water pricing mechanisms, and service costs.	CVC/CHCC	MP	Ongoing
<b>Strategy 6.2</b> Monitor consumer water use	<b>Action 6.2.1</b> Complete annual performance WEIP report with consumer classification water use statistics	CVC/CHC	HP	Ongoing
	<b>Action 6.2.2</b> Implement National Guidelines for Residential Customer's Water Accounts	AWA	MP	Ongoing
	<b>Action 6.2.3</b> Complete NOW Annual Performance Report	CVC/CHC	HP	Ongoing
<b>Strategy 6.3</b> Implement appropriate outcomes from Montgomery Watson Report.	<b>Action 6.3.1</b> Continue with plan elements (residential water audit, showerhead replacement program, landscape use efficiency, landscape regulation for non-residential- new development, tourist sector water audits, commercial industrial audits/incentives, regulations, pricing and billing)	CVC/CHCC	HP	Ongoing
<b>Strategy 6.4</b> Evaluate community attitudes and awareness of usage and technologies	<b>Action 6.4.1</b> Keep abreast of community attitudes and awareness of technological developments	CVC/CHCC	MP	Ongoing

## Goal 7: Supportive incentives and pricing policies.

<b>Strategies Key</b>	<b>Actions</b>	<b>Partnerships</b>	<b>Priority</b>	<b>Timeframe</b>
<b>Strategy 7.1</b> Implement selected incentives through WEIP – eg. shower head rebate.	<b>Action 7.1.1</b> Maintain current rebate programs.	CVC/ CHCC	MP	Ongoing
<b>Strategy 7.2</b> Evaluate success of incentive programs & investigate other possible incentives and their cost effectiveness.	<b>Action 7.2.1</b> Use surveys and evaluation forms. Determine cost/benefit referring to Montgomery Watson formula.	CVC / CHCC	LP	Ongoing
<b>Strategy 7.3</b> Develop common approach through an appropriate forum and establish an implementation program for this taking into consideration different Council needs/positions.	<b>Action 7.3.1</b> Collaborate with Regional Councils	North East Water Efficiency (NEWE)	MP	Ongoing
	<b>Action 7.3.2</b> Maintain best practice water pricing	CVC/ CHCC	HP	Ongoing

## Goal 8: A heightened awareness for efficient water use.

Strategies Key	Actions	Partnerships	Priority	Timeframe
<b>Strategy 8.1</b> Assess the WESP as developments in water efficiency awareness take place.	<b>Action 8.1.1</b> Provide for assessment and feedback through the Water Efficiency Team	CVC/ CHCC/WET	HP	Annual
	<b>Action 8.1.2</b> Conduct opportunistic assessment when working with all community sectors	CVC/ CHCC	LP	Ongoing
<b>Strategy 8.2</b> Regularly survey to assess performance of the WEIP.	<b>Action 8.2.1</b> Review performance at annual WET meeting.	CVC/ CHCC/WET	MP	Ongoing
<b>Strategy 8.3</b> Conduct regular school program, including lectures, visits and tours of sites.	<b>Action 8.3.1</b> Implement Waterwise schools program and regular tours	CVC/ CHCC/Dept. E&C	HP	Ongoing
	<b>Action 8.3.2</b> Capitalise on opportunities as they arise eg. CHCC community education trailer	CVC/ CHCC/ Savewater/Peak industry bodies	LP	Ongoing
<b>Strategy 8.4</b> Investigate and Implement education program for plumbers, retailers and nurseries.	<b>Action 8.4.1</b> Investigate the feasibility of and implement program where practical, including liaison with peak industry bodies.	CVC/ CHCC/ Savewater	MP	Ongoing
<b>Strategy 8.5.1</b> Promote home water audit packages	<b>Action 8.5.1</b> Promote existing home water audit packages.	CVC/ CHCC/ Savewater	LP	Ongoing
<b>Strategy 8.5.2</b> Monitor new products and assess promotion possibilities and relevant requirements.	<b>Action 8.5.2</b> Continue ongoing monitoring and liaise with industry and peak bodies e.g. WELS.	CVC/ CHCC/ Savewater	MP	Ongoing
<b>Strategy 8.6</b> Regularly report on strategic outcomes	<b>Action 8.6.1</b> Reporting for annual Management Review on WEIP	CVC/ CHCC	HP	Annual
	<b>Action 8.6.2</b> Review WESP and WEIP every 5 years	CVC/ CHCC	MP	Next 2018

## **4.0 Implementation and Review**

### **4.1 Implementation**

An Implementation Plan is prepared setting out actions to complete based on the Strategic Action Plans (SAPs). This includes the setting out of specific tasks related to the SAPs in more detail, identifying what the priorities are for each council and the cooperative partnership. The Implementation Plan provides direction on the allocation of responsibilities, time and resources to manage and complete the agreed tasks. This implementation process is linked to the reporting cycle set out in Section 4.2. The Implementation Plan is established in conjunction with community group representatives and relevant state government representatives. Resources needed for the Plan come from revenue raised by Council in the sale of water to consumers and other means through grants and at times possibly loans. Priorities are set, budgets estimated and funds allocated on an annual basis. Councils adopt and establish these budgets through their Strategic Business and Management Plans.

The main purpose of the Implementation Plan is to:

- 1) Develop new, and support existing, partnerships and promote a cooperative and integrated approach
- 2) Ensure that resources are available and matched to tasks and actions
- 3) Gather information from community and other relevant sources to help make better informed decisions on programs and other actions
- 4) Provide information to the wider community to promote water efficiency and keep people informed of progress; and
- 5) Review and evaluate progress and provide a means to adjust programs and actions where necessary.

The flow chart on the following page shows the Target Areas to be focused on in the Implementation Plan. These Target Areas are related to the three Key Elements of WESP.

### **4.2 Role of Water Efficiency Team in Planning and Review**

The planning approach adopted in the Plan enables and encourages evaluation and review of our progress. Review of the Plan and its implementation is done by annual community consultation through a Water Efficiency Team (WET). The WET is involved in reviewing the year's work and timelines, reporting on financial and partnership aspects, and identifying budget requirements. Every 5 years the WET also reviews updates the Plan and the WEIP.

# The Water Efficiency Strategic Plan

## Key Elements

Regulatory and Integrated Approach

Supply Management

Demand Management

Goals, Strategies & Actions

## The Implementation Plan

## Targets

Participation in and maintenance of stakeholder networks

Water audits for high water users in commercial, tourism and industrial sectors

Water education programs for schools

Water pricing mechanisms to reduce water demand

Water saving and re-use in infrastructure design operation and maintenance

Rebates and other incentives to reduce water use

Publicity and campaigns to maintain water saving awareness

Regulatory mechanisms to reduce/manage water demand

Our approach is to make sure we meet the Guiding Principles of the Plan, and that we are working meaningfully towards our goals and vision, and our actions are accountable. The Implementation Plan enables us to carry out reviews at appropriate stages to measure our progress and overall success. We can carry out this review by developing strategic questions to look at how we are performing in regard to the Key Elements and Target Areas. These questions could include for example:

### **Key Element: Regulatory and Integrated Approach**

Is our regulatory and integrated approach helping achieve water efficiency and ecologically sustainable water management, through:

- supporting common action such as drought management policies, catchment management and pricing of water, which includes the real costs of providing it?
- requiring urban, rural and commercial development to be designed on ESD principles?
- supporting best practice water source and supply system management?
- adopting and encouraging demand management programs?
- cooperative action and effective partnerships at a range of levels?

### **Key Element: Water Source Management**

Is our Supply Management System:

- using the most ecologically sustainable supply source(s)?
- reducing leakage and other water losses in the system to least possible levels?
- using the best, most cost-effective technological practices available?
- investigating emerging ideas, innovation and technologies?

### **Key Element: Water Demand Management**

Are people aware of, and actively involved in efficient use of water, including:

- through participation in our Demand Management programs?
- using water in an efficient and ecologically sustainable way?
- if our community are not being efficient enough, where and how can we improve?
- are our education and awareness raising programs effective and covering key areas of business, community, residents, visitors, schools and public institutions?

Our Implementation Plan will work on a SMART approach to actions. The **SMART** principles are:

**Specific** - we will set clear tasks and programs that we want to achieve

**Measurable** - we can set targets and check on our progress

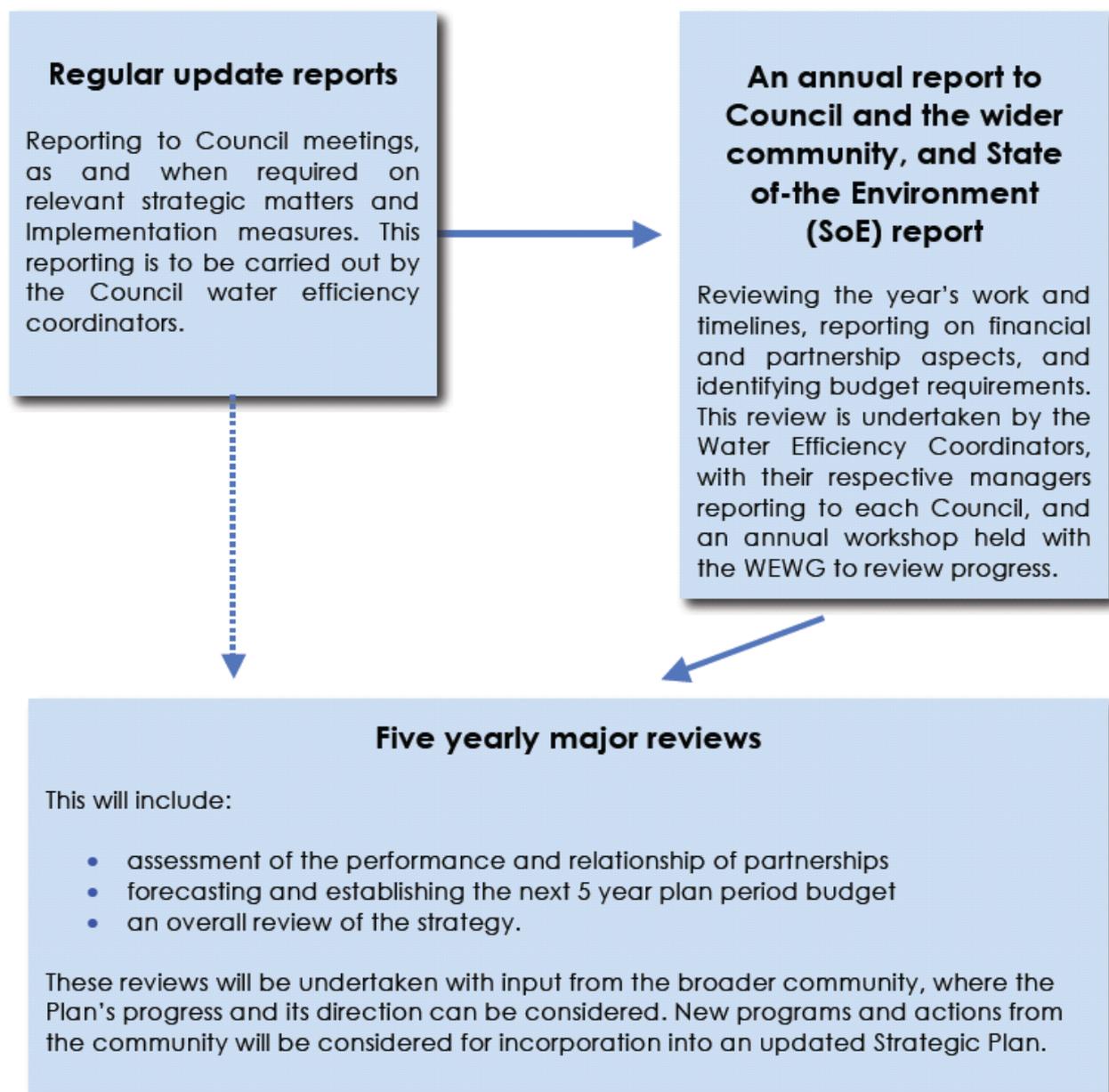
**Achievable** - we believe we can do what we've set out to do

**Realistic** - we will set ourselves practical and meaningful tasks

**Time-oriented** - we will seek to get tasks completed within an agreed time-frame.

## 4.2 The Review Process

The Strategic Plan is an accountable and practical plan supporting the implementation of ecologically sustainable water efficiency and management programs. The planning approach adopted in the Plan enables and encourages evaluation and review of our progress. Review of the Plan and its implementation happens in the following ways, which includes annual community involvement through a Water Efficiency Team (WET).



### In summary...

The review and evaluation process will ensure the Strategic Plan, its key goals and programs can be adapted to new information and understanding, and updated regularly ensuring its application for many years to come - a key aspect of sustainability planning.

## ***Abbreviations***

To assist the reading of the Plan, the following list outlines abbreviations used in this document:

**AWA** - Australian Water Association  
**CBSM** – Community Based Social Marketing  
**CHCC** - Coffs Harbour City Council  
**CHW** - Coffs Harbour Water, a business unit of CHCC  
**CVC** - Clarence Valley Council  
**DCP** - Development Control Plan  
**DECC** - Department of Environment and Climate Change (now Environment and Heritage)  
**DNR** - Department of Natural Resources (now Environment and Heritage)  
**E&C** – NSW Department of Education and Communities  
**F/Y** - Financial year  
**LEP** - Local Environment Plan  
**LGSA** - Local Government Shires Association  
**MW** - Report Clarence Valley/Coffs Harbour Water Efficiency Strategic Plan (Volume 1 & Appendices), prepared by Montgomery Watson in August 2000, and later updated by review in 2001  
**NEWE** - North East Water Efficiency  
**NRCMA** - Northern Rivers Catchment Management Authority  
**NCW** - North Coast Water: a former business unit of Clarence Valley Council  
**NOW** – NSW Office of Water  
**SEPP** - State Environment Protection Policy  
**WEIP** - Water Efficiency Implementation Plan  
**WESP** - The Regional Water Efficiency Plan  
**WET** - Water Efficiency Team (comprises representatives of Councils, Community, State Government Agencies)

## ***Acknowledgements***

### **The Planning Process and Preparation of the Water Efficiency Strategic Plan (1997) - Strategic Planning Workshop November 1997:**

The Community Advisory Group for their work at planning workshops providing the basis for, reviewing and signing off on the draft Plan. These included:

- The Councils of the Clarence Valley, and Coffs Harbour City Council
- Clarence Valley residents and resident groups
- Coffs Harbour and Orara Valley resident groups and residents
- Youth representatives from high schools
- Community groups including conservation and farming interests
- Clarence Valley and Coffs Harbour Building & Plumbing Industry
- State government agencies including: Dept of Land & Water Conservation, Dept Public Works, Dept Local Government and Environment Protection Agency
- NSW Healthy Rivers Commission

**Initial Plan Preparation Working Group:** Jim Fear (project co-ordinator), Gary Kennedy, Ian Preston, Cr Fred Morgan, Cr Bruce Tucker, (the late) Cr Joy Mathews, Simon Thorn, FrankVaarwerk, Kevin Warner, Nerise Windsor (minute secretary)

**Sustainable Futures Australia:** Peter Cuming, facilitator of Community Planning Workshop and Plan Working Group, preparation of Strategy Plan, concepts for graphics and report layout. Joanna Terpestra, graphics except for the Waterwise logo. Desk Top Publishing, by Osprey Design and Sustainable Futures.

### **The Water Efficiency Team; the WESP Review, 2006; and updated WESP, 2007.**

**WET and Review process:** Participants in the WET through the years of initial plan implementation, at the WESP Review 2006, and final updated Plan preparation, including the following interests: Clarence Valley Council and Coffs Harbour City Council, Clarence Valley and Coffs Harbour and Orara Valley resident groups, Clarence Valley National Parks Association, Clarence Valley Conservation Coalition, Clarence Environment Centre, State government agencies including: Department of Infrastructure Planning & Natural Resources, Department of Commerce, and NSW Public Health, Clarence Valley Council and Coffs Harbour City Council, Martin Duyker (North Coast Water) and Melissa Hinkley, (Coffs Harbour Water) for their contribution at the review workshop and providing information and photographs to update the WESP document.

**Sustainable Futures Australia:** Peter Cuming, facilitator of 2006 WESP review workshop, updating the WESP document including layout. Kirstie Fisher for assistance in report layout and liaison with the councils. Layout and graphics support by Nena Pollard and Jon Dugdale. Original Plan graphics prepared by Joanna Terpestra, based on concepts by P. Cuming, 1997.

**The WESP Review and updated WESP, 2013** - The Water Efficiency Team for review of the document, Sustainable Futures Australia (and Peter Cuming) for providing the planning document that the 2013 version of the WESP is largely based upon. Matt Foley (Clarence Valley Council) and Melissa Hinkley (Coffs Harbour Water) for their providing information to update the WESP document, contribution during the review workshop and updating the WESP document including layout.