

# 1<sup>st</sup> summit meeting

## The Intelligent Use of Water™

For further information, please contact:  
Rain Bird Europe - Tel. : 04 42 24 44 61  
email: ruie@rainbird.fr  
www.ruie.fr

Organized by:

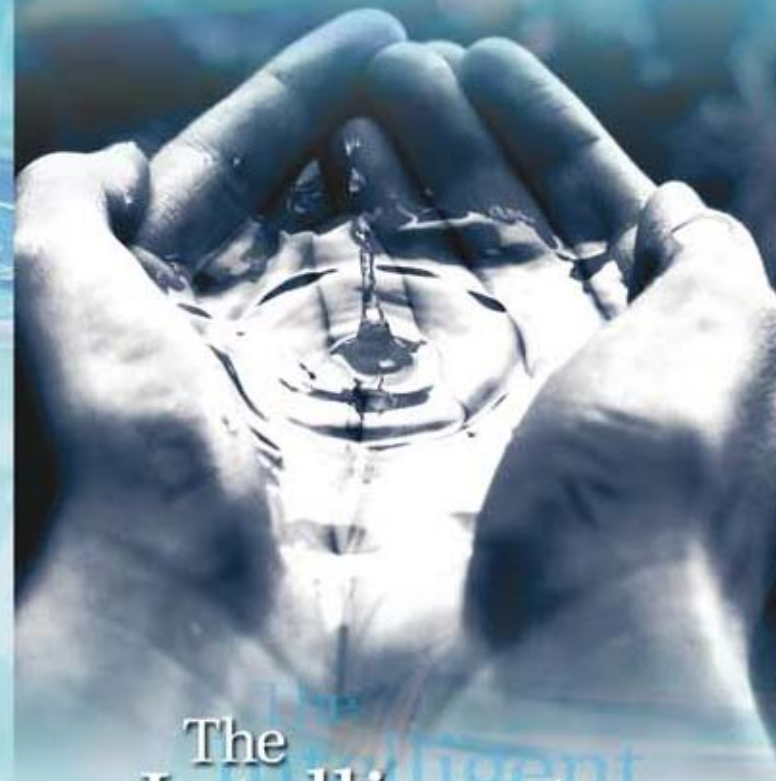
**RAIN  BIRD®**

With the participation of:

**SOCIETE DU CANAL DE PROVENCE  
ET D'AMENAGEMENT DE LA REGION PROVENÇALE**  
Le Tholonet - CS 70064 - 13182 Aix-en-Provence CEDEX 5  
Tel. 04 42 66 70 00 - Fax. 04 42 66 70 80 - www.canal-de-provence.com



# 1<sup>st</sup> summit meeting



## The Intelligent Use of Water™

May **30**, 2006



# 1<sup>st</sup> summit meeting

## The Intelligent Use of Water

### RAIN BIRD EUROPE

#### *A word from the Manager*

Water is a precious commodity. Drought, water restrictions banning watering, such were the watchwords of recent summers. And yet, water is what keeps the world alive! That is the reason why several years ago Rain Bird, the world leader in automatic watering, embarked on the struggle against wasting our «life-giving» resource. Rain Bird took the initiative of organizing the «First Intelligent Use of Water Summit Meeting» in order to continue its commitment to water savings. This event was designed to make water users aware of the need to protect this rare resource.

One of the main aims of this summit meeting was to make politicians and decision makers who influence water use in France more aware of the importance of water management.

Watering our public squares, gardens and private or public parks, fields and golf courses, is essential for preserving the green heritage of France. In our capacity as professionals in the irrigation industry, we firmly believe in the need for the Intelligent Use of Water and sustainable development. We think that banning watering not only does not solve the water shortage problems, but also has serious economic consequences.

We believe in the need for sensible public policy that distinguishes between agricultural irrigation and watering green landscaped areas. Faced with increasing water shortages overall, we have to act immediately and push for a change in behavior to encourage water conservation. However, people, companies and communities take up values and conservation attitudes only if they are suitably motivated. Key motivations include incentive government measures, education and public awareness.

Together we can guarantee that our green heritage will be long lasting.

**Daniel EISENBERG**

*Chief Executive Officer  
RAIN BIRD EUROPE*

# Tuesday May 30, 2006

|       |   |
|-------|---|
| 08:30 | Welcoming of participants   |
| 08:45 | Opening of the summit - Introduction  |
| 09:00 | <b>The Water Act, challenges and aims</b><br><b>Mr. Boinel</b> , Chargé de mission for water resource management at the <b>Ministry for Ecology and Sustainable Development</b>       |
| 09:20 | <b>Water at the source</b><br><b>Mr. Plantey</b> , Chief Executive Officer of the <b>Société du Canal de Provence</b>   |
| 09:40 | <b>Irrigation and spraying efficiency</b><br><b>Messrs. Penadille and Granier</b> , Researchers at the <b>Cemagref</b>  |
| 10:00 | <b>How to reconcile the magic of plants and water saving</b><br><b>Mr. Behar-Bannelier</b> , Director of Horticulture at <b>Disneyland Resort Paris</b>                               |
| 10:20 | <b>Public green spaces and optimization of watering</b><br><b>Mr. Nold</b> , Head of the Agronomy laboratory of the Parks and Gardens Department of the <b>City of Paris</b>          |
| 10:40 | Break   |
| 11:00 | <b>Golf on course: Water</b><br><b>Mr. Paris</b> , Vice Président de la <b>French Golf Federation</b>   |
| 11:20 | <b>Sports ground watering, efficiency and rationalization</b><br><b>Mr. Girard</b> , President of the Central Fields and Equipment Committee at the <b>French Football Federation</b> |
| 11:40 | Round table, discussion with the audience   |
| 12:30 | Buffet  |



# 1<sup>st</sup> summit meeting

## The Intelligent Use of Water

### MINISTRY OF ECOLOGY AND SUSTAINABLE DEVELOPMENT

#### THE WATER ACT, CHALLENGES AND AIMS

Within the context of climatic change and population growth, water is a key global challenge on. Ecological, economic and social balance depend on it.

This report may seem far removed from our French problems. In fact we are lucky to have a large water system that has modeled our territory and constitutes a plentiful resource all in all. But water availability in our taps should not be taken for granted. It is a privilege that should encourage us even more to ensure water quality and make it available in natural surroundings and thereby guarantee that water needs can be met tomorrow. After a dialog and discussion stage that lasted nearly two years, the Senate voted in April 2005 at the first reading of the draft act on water. This draft is now debated in the National Assembly.

The purpose of this act is to enable us to achieve the targets set by communities within the framework of European water policy. The draft water act is going to complete the work carried out since the summer of 2002 regarding the reform of water policy, concerning both regulation tools and institutional or financial points of view: flooding risk prevention, setting up overseas water agencies, legal transposition of the directive blueprint on water, protection of collection basins, international cooperation, protection of wet areas, soil erosion control, etc.

It will form the central text of French water policy whose main constituents it confirms. Thus, collection basins are reaffirmed as the preferred perimeter for defining long lasting management objectives and implementing measures intended for achieving them. Likewise, the association of water users or their representatives in the definition and follow-up of water policy is widened. The principle that their financial contribution, through fees, or exclusively involved in water policy is strengthened.

Tuesday May 30, 2006

This draft act, 10 years in the making, concerns three main issues:

- Improving government in the water field
- Strengthening our tools for providing water quality and the water environment
- Facilitating and making water services and reclamation more transparent, especially for non collective water treatment.

Faced with drought phenomena, management of water resources should not be reduced to crisis management. Structured action should be taken to reestablish the balance between supply and demand of water in the long term.

That is the core of the plan for managing water scarcity submitted to the Council of Ministers on 26 October, 2005. Even if it is based on the medium term, several actions have already been started.

The first issue in this plan provides for strengthened affirmation of drinking water priority. This should not be practiced to the detriment of the water environment, but in the priority agreed to it compared with other uses for exploiting water resources.

These arrangements will be made in the draft act on water and its surroundings: requirement for water meters in new communal buildings, creation of water saving areas enabling communities to intervene more efficiently quantitatively to protect their drinking water resources.

The second issue in this plan relates to thrifty water management and how it is divided up between different uses, not forgetting water surroundings of course. An appraisal assignment has been jointly started with the Ministry of Agriculture to begin reforming water management in agriculture and new methods of community management.

Starting this year, an integrated approach to water management for reducing water supply and demand imbalances has been implemented in ten pilot collection basins. This experiment should make it possible to use the complete set of action options: water economy, mobilisation of resources or development of new methods for all water uses.

*There is no universal response to the drought problem, but a set of tools to be used appropriately in responding to local problems.*

**M. Boinel**

*Official representative  
for water resource management  
Ministry of Ecology  
and Sustainable Development*



### CEMAGREF

#### IRRIGATION AND WATERING EFFICIENCY

The Irrigation Equipment Testing and Research Laboratory (LERMI) was set up in 1969 to provide technical support to the departments of the Ministry of Agriculture and to manufacturers, and to play a role in developing and improving irrigation equipment.

When Cemagref became the Scientific and Technological Public Research Corporation (EPST), irrigation research operations were expanded with various partnerships.

In 2005, the Aix en Provence irrigation team was combined with Montpellier within

the UMR G-Eau (*Mixed Research Unit - Water Management Players and Practices*).

Nationally and internationally, LERMI today appears as a key partner for the whole profession (*manufacturers, users, public services*), and the necessary source for all those who need technical information about irrigation.

On several occasions, LERMI has participated internationally in setting up and developing testing laboratories like SEEN (*Morocco*) or AENRI (*Egypt*).

Laboratory operations are directed towards 2 main issues:

- Prototype testing in the laboratory and under controlled conditions
- Research or R&D work on irrigation system performance

**1-** Prototype tests are run at the request of manufacturers or users in accordance with standard protocols (*ISO, CEN*) or Cemagref specific protocols (*clogging tests*). This operation is for developing the skill of teams in the testing field and improving knowledge of actual problems by developing links with manufacturers and users. On the other hand, these tests contribute to the laboratory's national and international reputation (*cooperation with Morocco, Egypt, Jordan*) and are the beginning of a worldwide project network for cooperation between laboratories. In addition, databases can be supplied from testing carried out for around thirty years. In addition to these testing operations, work on draft standards represents a not negligible operation for LERMI in defining testing protocols and preparing standards.

**2-** Research work on irrigation system performance is carried out in contact with irrigation professionals (*equipment manufacturers or technical institutes*) for solving specific problems. They are intended to enhance acquired skills, contributing to technological innovation and acquiring data for supply databases. But it is also research work that depends on more basic knowledge (*agronomy, bioclimatology, fluid mechanics, etc.*), that aims to include physical phenomena at work, and always for the purpose of improving irrigation practices. This kind of work depends heavily on experimentation and modeling techniques.

This kind of work can be illustrated by the IRRIPARC studies. It is a method developed at Cemagref working with the Arvalis-Institute of Plants. The aim is to prepare advice on adjusting and using sprinkler irrigation equipment in the field, taking into account specific regional factors.

#### Messrs. Penadille and Granier

*Researchers  
Irrigation equipment research  
and testing laboratory  
Cemagref*



### DISNEYLAND RESORT PARIS

#### HOW TO RECONCILE THE MAGIC OF PLANTS AND WATER SAVING

When Walt Disney looked for land in California in the '50s and in Florida in the '60s, he was looking for a place not just for building a park but also a place for realizing his dream. Walt himself had the idea of this project, it was a very large area for realizing all the dreams in his imagination: Disneyland California 1955, Walt Disney World 1971, Disneyland Tokyo 1988, Disneyland Paris 1992, Disneyland Hong-Kong 2005.

Today Disneyland Paris is a wonderful park with a wide variety of attractions and also plant surroundings.

The landscaping was designed on the basis of 3 concepts:

- the comfort of our guests: shade and shelter
- the construction of hillocks so as to be in a calm beautiful environment cut off from the real world
- telling a story through gardens and the plants in them.

The gardens in Disneyland Paris are gigantic stage settings where the plants play a part. Each one takes part in fantasy, another world, another culture. Disneyland also provides a landscaped framework, an environment where we place great importance on ecological balance where water has an essential role.

Water is vital for vegetation. If it is badly managed, there is a risk of it having an impact on our gardens and on our botanical collections. Water should be managed for economic reasons as well as ecological ones. These days, we have to work in various directions to progress: reducing consumption through adaptation, repairs and technical changes to the system, and also organizing the best possible ground keeping team, training them and for that purpose significant human and financial resources shall be required. With the teams, innovative operating strategies will be continually required: tests, monitoring and analyses must be set up. Management must continually be aware of the changes in plant evolution in construction with our user or service provider partners.

Our 1 million flowers per year, 35,000 trees, 350,000 bushes are irrigated in Disneyland Paris by a built-in system 6,000 kilometres long. The extent of this system requires close cooperation with partners who for us in Disneyland Paris have to share the same work and ideal service convictions.

Considering that 80 % of a plant is water and that it is essential for photosynthesis and transpiration, it is important to remind our teams and ourselves of the basic rules of watering, that an irrigation system is only a supplemental water supply for plants.

We therefore think about planting during well defined seasons, thoroughly tamping vegetation, and adjusting the automatic irrigation system daily in order to provide for plants needs according to the calibration of the system, potential evaporation-transpiration experience (PET), rainfall, and agronomic parameters.

In water use research, it will of necessity be a matter of mobilizing financial and human resources, meeting companies using the systems to exchange techniques, identifying practices and innovative strategies, operating strategy, putting testing and monitoring in place and with time for considering the overall picture.

Undoubtedly our cultivating methods will be reviewed and perhaps it would be timely to repeat tried and tested ancestral practices that have made it possible to develop the present heritage.

*We are at a decisive moment in sustainable development matters and if we do not look into water use reduction, we risk jeopardizing the environmental heritage that we are leaving to future generations.*

**Mr Behar-Bannelier**

*Horticulture Manager  
Disneyland Paris*



### CITY OF PARIS

#### THE MIR METHOD

In order to ensure that its vast heritage is irrigated and maintained, the Parks, Gardens and Landscape Office (PGGSO) of the city of Paris is earmarking nearly 10% of its operating budget for water bills. This represents consumption of 19mm<sup>3</sup> of nondrinkable water (NDW) and 1.7mm<sup>3</sup> of drinking water (DW); with leakage estimated at between 10 % (DW) and 20 % (NDW).

To accompany the environmental policy of the Paris council, the PGGSO has set itself the target of reducing water consumption by 20% over three years. All created or rehabilitated landscaped areas were designed in an attempt at ecological management. The use of rustic plant varieties is advocated, while watering with collected rainwater seems to be developing. At the same time, resource management is still the rule. It is based on using a structured irrigation method (MIR).

This method of watering developed since 1997, is covered by a restart plan in 2006. Based on thirty years of Evapotranspiration (ETP) and Rainfall statistics, it has been developed to alleviate the difficulties in acquiring this data in real time and for avoiding the variety and / or lack of programmers and watering software. Exceptional weather events have been considered (ETP) or eliminated (rain), to make the method safe.

During the usual watering season - namely between April and 15 September - the water deficit is assessed at 350 mm. After gardeners had chosen the agronomic (required reserve, infiltration velocity, root depth, horticultural coefficient) and hydraulic parameters (irrigated area, system flow), MIR offers a monthly adjustment of the application or frequency based on application strategies (constant application or constant frequency).

The MIR method should be advantageous for early leak detection, economies in some horticultural work, the resistance of plants to droughts and overall protection of water resources.

By matching the watering culture within the PGGSO, the MIR method makes equipment inventorying and evaluation easier, with the intention of facilitating their development. Unlike centralized management, it clearly assigns the responsibility for watering to gardeners.

The PGGSO has set up a network of motivated employees (water correspondents and referents) and has agreed to extensive training efforts to promote training and its suitability for its 2200 field personnel.

Some MIR changes are expected, such as management of other uses of water to promote respect for the resource and to take account of actual rainfall in order to increase water savings.

#### M. NOLD

Head of the agronomy laboratory  
Office of Parks, Gardens and Landscaped Areas  
Paris Town Hall



### FRENCH FOOTBALL FEDERATION

#### WATER: ATHLETIC FIELDS' BEST FRIEND

Football matches take place on three kinds of playing areas:

- Natural grass pitches,
- Artificial grass pitches,
- Stabilized ground pitches.

Regarding natural grass pitches, namely 95% of pitches used for football practice and competition, the playing area is made up of a mixture of grass with a combination which should comply with the requirements sought for a good lawn:

- Resistance to player traffic
- Resistance to cryptogamic diseases
- Appearance in summer & winter
- Long lasting.

It is important to emphasise that athletic fields dedicated to professional or amateur football, are virtually all owned by local authorities.

Whatever the kind of playing surface, their quality and player comfort, these can only be obtained by using certain construction and maintenance methods, and more specifically, by watering these playing surfaces.

Considering the high permeability (*sought after*) of the substrate, water is essential to the life of the grass. Water circulation unfortunately is often impeded as a result of the ground surface being clogged (*due to players' shoes*), hence the importance for carefully combining maintenance, plant food, and watering in appropriate quantities properly spaced for these surfaces.

30,000 pitches are at present listed in France, of which 9,000 are watered, either by means of a traditional » agricultural type » system, or with sprinklers built into the playing area.

The elite football grounds should also be considered League 1 and League 2 fields where professional footballers with television contracts, require very high quality all weather surfaces.

The French Football Federation has regulations governing pitches and facilities that specify the requirements to be complied with regarding safety, reception and comfort for each competition level.

A chapter is devoted to watering, covering the following points:

- Quality research and high technical level.
- Use companies that have been certified.
- The Federation is a signatory to a quality charter with the national watering union.
- Training operators how to use systems.
- Technical constraints (*valves, sprinklers*) for using water rationally.
- Maximum sprinkler cover diameter : 60mm.
- Technical file.
- Maintenance and periodical inspections.

Although it does not own stadiums, the French Football Federation wants to make sure that the durable quality of playing surfaces used by it is involved rationally in the use of water specifically for watering, and to contribute to better water management.

**Daniel GIRARD**

*Chairman of the central committee  
of pitches and facilities  
French Football Federation*

