

**Miramar Ranch North Planning Committee (MRNPC)**  
**MRN Maintenance Assessment District (MAD) AD Hoc Subcommittee Meeting**  
**MEETING MINUTES**  
Tuesday, May 20, 2014  
Scripps Ranch/SRCA Community Center

**Meeting Called to Order** at 7:02 pm. A quorum was not established.

**Members Present (5 total):** Tom Meissner, Ernie Burciaga, Jan Kane (Secretary), Bill Crooks (Immediate Past Chair) and Lorayne Burley (Chair).

**Guests (4 total):** Wally Wulfbeck (SMRPG Chair), Sandy Wetzel-Smith (SMRPG), Casey Smith (District Manager, City of San Diego, Park and Recreation – MADs) and Mike Rasmusson (Grounds Maintenance Manger, MRN-MAD)

**Introductions:** Committee members and guests in attendance introduced themselves.

**Public Comment** (Non-Agenda items): None.

**Modifications to the Agenda:** None.

**PRESENTATION/ DISCUSSION ITEM:**

1. Discussion with Casey Smith, District Manager, SD Park & Recreation, and Mike Rasmusson, the newly appointed Miramar Ranch North (MRN) MAD Grounds Maintenance Manager (GMM) to review current MAD issues, exchange feedback and provide a budget update.

Casey Smith introduced Mike Rasmusson our new GMM and shared his background.

Recall from earlier notes: Mike has been with the MAD program for 2 years and has been assigned to the North Park, El Cajon, Hillcrest, Talmadge and University Heights MADs. Previous to working in the MADs Mike was the Nursery Supervisor for the City's Kate Sessions Nursery in Balboa Park. He has been working for the City for 23 years. He started as a Grounds Maintenance Worker II in Mission Bay and has worked with Support Services and Park Forestry crews, in the Balboa Park Botanical Building and at the Kate Sessions Nursery. Mike has a very extensive background and knowledge in horticulture and will fit well in the Miramar Ranch North MAD.

Currently, Mike has been on the MRN-MAD GMM job for 1 week and was recently in charge of the botanical sites in Balboa Park. Mike earned the title/nickname of "**Park Picasso**" at this past job position and also "**Park Mariposa**" due to his success with working on butterfly friendly materials in the park areas. He shared observations/improvements/suggestions:

- Fire resistant plant use and education.
- Adding simple botanical signs/markers.
- Use of drought tolerant/water wise plants.
- Better slope/hill management, drought materials, less maintenance, more color.
- Fire Station 37 would be excellent area to utilize fire resistant materials.
- Need to cut trees/plants that block turn views along Spring Canyon Road, signage and over hangs along Scripps Poway Parkway.
- Enhancing Butterfly Park with butterflies. The park area surrounding the SR/SRCA Community Center does not have any butterflies, needs nectar providing plants.

Casey shared that Mike has connections with area plant nurseries to assist with lower cost replace items. He looks for opportunities to use plant cuttings/younger plant materials. The simple botanical markers are very low cost.

Sandy Wetzel-Smith suggested having future kid friendly learning opportunities about planting and growing small clippings or seedlings and fire resistant plant materials. A very simple small nursery area at SR/SRCA Community Center could be developed on the grounds. Hosting garden boxes and renting them out.

### **Irrigation Issues**

Tom Messiner led the discussion on the ever present irrigation problems around the 700 watering stations in the MRN MAD. Currently, significant amounts of water run down the roadway at the intersection of Spring Canyon Road (SCR) and Scripps Ranch Blvd (SRB). Also, the roadway along the west end of Scripps Poway Parkway has noticeable water (\$\$\$\$) running along the sidewalks and roadway. It was agreed to have both of these two areas flagged for repair and/or corrections within the present budget.

For the irrigation problems an overall survey of all the 700 water stations is ongoing by current landscape contractor, Blue Skies. With the current contract, which expires in 10-31-15, Blue Skies checks the 700 water stations biweekly and they only can cycle through areas. Watering heads are currently overhead sprays. Could be improved by using MP rotator heads or dip systems. Rotator heads do come w/ a cost. Currently, have been replacing only gaskets, as needed, on existing equipment. Current suggestions are to reduce watering in areas, split watering times, note irrigation problems/leaks.

Another challenging problem with the watering in the MRN areas is the many slopes areas with plants and trees. The slopes, with often poor soil conditions, provide potential for more water runoff. The slope area is a contributing factor to the water run-off at SCR and SRB.

### **Weather Based Irrigation Systems**

The topic of newer watering technologies/equipment was discussed. Weather based irrigation systems and/or soil probes are popular. Potential long-term MAD goal or CIPs? Both Carmel Valley and Carmel Mountain Ranch MADs are converting areas for use. These systems use wireless watering systems operate on the principle of scheduling irrigation as a function of weather conditions. Most products use real time or historic weather data to schedule irrigation base on water moisture. Casey agreed to provide MRN MAD info on the equipment under considering with the Carmel Mountain Ranch MAD proposal. Possible vendors included: ET Water, Rain Bird. I will post a general info article on weather based irrigation systems on the MRNPC webpage.

### **Wind storm damage**

Two recent wind storms in the MRN area damaged 13 trees. 6-7 of the trees are Iron Bark trees. Most trees were along Scripps Poway Parkway. One tree landed on fence on Blue Cypress Drive. Currently, we have \$2K remaining in our tree trimming budget and will likely go over a few thousand. We reserve \$5K for unknown problems/expenses but spent \$3K on clean up after the early March 2014 storm. We have \$2,500 in the budget set aside for fence repair and don't anticipate the funds to be spent this fiscal year so can use this overage on tree trimming if needed. Many trees were damage in other San Diego MADs.

### **MAD Budget**

Currently we are spending approx. \$30K per month for landscaping services from Blue Skies. We are waiting for actual gas tax number to assist w/ incoming revenues. In general, the accounts are in good shape. We have dialed down extra spending. Have a good contractor. Need to consider replacing Iron

Bark trees w/ new trees and drought tolerant materials. As noted above, the Blue Skies contract expires on 10-31-15.

### **SR/SRCA Community Center parking lot**

On May 1, 2014, I met with Bob Ilko and Casey Smith to discuss some issue regarding parking lot problems (EBS parent parking and handicap parking) at the SR/SRCA Community Center. The community needs two more handicap parking spots to service residents using the center. (Potential future CIP?) Cost for re-paint of the parking lot is approx. \$500. Quote for work is pending and the two additional ADA parking stalls can be added within the City guidelines. Funds from the MAD were considered but not recommended by MRNPC members. Development Agreement Funds are appropriate and additional line item could be added for coverage of cost for the re-paint work.

### **Final Comments**

A request was made to see a priority list of working items in the monthly reviews. A new MRN MAD area map is available and will be shared with members.

The suggestion to host a "MRN-MAD Drive-around" to review the current area and enhance understanding for our MAD was made. I am open for any volunteers who might want to organize this activity.

**Adjourned** at 8:30pm.

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### **Check your calendars:**

Next possible meeting date for MRN MAD Ad Hoc subcommittee, 2 weeks prior to the December 2014 MRNPC meeting – **Tuesday, November 18, 2014?**

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# Sprinkler Systems, Irrigation Controllers, and Sensors by watercook, 181 Followers

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An irrigation controller is the clock that runs a sprinkler system. A good controller can make the difference between a landscape that is efficiently managed and one that is not. It can also have a strong effect on a business's monthly water bill.

Property managers who inadvertently water their landscapes too much or at inappropriate times of the day nearly always end up with high water bills. The newer controllers, like Hunter or Toro irrigation controllers, take into account local weather conditions. They make it easier to have a healthy landscape and a healthier water bill, too.

Really large sprinkler systems may have more than one controller. Each controller has several stations (timers), depending on its size, that control different parts of the landscape, each station with its own timer. Older controllers and their stations are programmed by hand, with the landscaper guessing how much water each section will need. Newer ones take weather and other factors into account, modifying programmed schedules to water only when plants are thirsting.

## What are Weather Based Irrigation Controllers?

There are several different kinds of "Weather Based Irrigation Controllers" (WBIC) or Smart Controllers, and all of them work by using input about the site from local sensors or satellite weather stations to modify the watering schedule. Examples of information WBIC's can take into account are: weather readings, moisture in the air, moisture in the soil, solar radiation, plant types, soil types, slopes, and water pressure. Each of these factors affects the amount of water needed by plants in a landscape, and alters the amount of water the controller will allow through the sprinkler system.



Weather Based Irrigation Controller made by Rain Bird - a leading manufacturer for home-based and professional irrigation systems.

Source: Susette Hornpool, CC-BY-SA 3.0

## How a controller works.

Each controller has several stations hooked up to valves that feed water to sets of sprinklers in different locations or zones. Controller sizes can vary from four to 200 stations, each with its own timing. Since stations are designed to match the watering needs of whatever plants are in its relevant zone, having a number of them provides a lot of flexibility with watering.

The size and number of controllers chosen for a sprinkler system depends on the size and complexity of the landscape. As mentioned, each landscape zone is watered by sprinklers controlled by a valve. Station timers control the valves and controllers host the stations. Since controllers/stations are hooked up electronically to the valves, they have to be located near enough to allow for a hookup.



Wiring Linking Controller and Valves  
Source: Sueette Horspool, CC-BY-SA 3.0

A six acre site with valves spread out through the landscape with many different types of plantings could have 8 controllers with 64 stations each, whereas a one acre landscape may need only one or two controllers with 8 stations each. A station could be set up to water trees and bushes on one side, another for grass in front, a third for a drought tolerant section, another for medians or parkway, one for a shady section, or another for grass in a far corner.

### Controllers vs. nozzles.

There are some situations in which problems with watering have been blamed on improper controller programming, when in fact that may not be the case. The most common of these is really a problem with irrigation nozzles.



Without thinking, most people set up their sprinkler systems to water flat turf, whether or not the schedule is best for the other types of plantings there.

Different types of plants require different speeds and lengths of watering, and so do different soils. For best watering, different plant types should not be watered by the same station, nor should they be watered by the same types of nozzles (see "Irrigation Nozzles"). Because different types of nozzles allow for different amounts of water through them, if you mix them on the same station, you will cause one area in a section to be either shorted or flooded.



Watering on a slope is tricky. You want to water so it sinks in, but doesn't run off. That means scheduling your controller for short run times several times in a row, so water has a chance to sink down between times.

The reason a controller has a number of stations with their own timers is so that a landscaper can take the difference in nozzles and plant types into account when programming watering schedules. The stations and their valves give much needed control.

But a landscaper that bypasses that control by mixing nozzle types or plant types on the same station loses the flexibility that a good controller gives.

### **WBIC scheduling assists - like rain & soil sensors.**

When first installing a new WBIC, the landscaper will be entering the soil type, types of plants, water pressure, and location of property (latitude and longitude or zip code), among other data, as detailed by installation directions. Additional information will be provided by additional accessories that support more efficient watering with a WBIC:



Native plants should need hardly any watering. That section of the landscape needs a station of its own, with its own watering schedule, or the plants will be overwatered and die.

Source: All by Author - Susette Horspool, CC-BY-SA 3.0

- Weather (rain) sensors connected to irrigation controllers have proven to be the most accurate controller systems so far, according to a study conducted by the University of Texas. This system does not rely on state weather data or soil moisture, but measures moisture in the air of your landscape. When it starts to rain, felt pads inside the sensor swell, triggering the sensor to turn off the controller automatically. When the rain stops and the pads dry out, they shrink, and the controller is reactivated.



Rain Bird WR2-RC A55300 Wireless Rain Sensor

This rain sensor has been rated as easy to set up, well functioning, and it works with a variety of controllers.

Amazon Price: \$68.50  
List Price: \$99.00

- The State of California has a CIMIS system, run by the Department of Water Resources, that gathers weather information from all over the state. (CIMIS stands for California Irrigation Management Information Systems.) The state set up the system originally to collect its own weather data, but then realized landscape companies and private homeowners could benefit from it too.

Readings come from a multitude of weather stations, like the one on the right, that are placed all over the state, high and low. These stations feed weather data into a central computer monitored by the state. WBIC-controlling websites draw local weather information from the CIMIS system, and use it for their subscribers to control the irrigation timers on their properties (see link below).



**CIMIS Weather Station**  
Source: Coachella Valley Water District

- **Soil moisture sensors** - You can also hook up soil moisture sensors to a regular controller or Smart Controller. These sensors measure the moisture in your soil, then signal the controller (or valve) when it needs watering. Using this type of sensor makes for very efficient watering, but it does take some initial checking and adjustment.



**Soil Moisture Sensor**  
Source: Davis Weather Instruments

## **Purchasing a WBIC.**

The type of Smart Controller you choose to buy will depend on conditions onsite. Here are some things to look for:

- **Is it user-friendly? Easy to understand and program?**
- **Does it allow for sensors to be attached and read?**
- **If you have a large property, or one with controllers watering areas that can't be seen from its location, does it have a remote control function?**
- **Are there enough stations on each controller to cover all the**



**Orbit 57096 Super-8 Controller with Remote**

planting zones the property has?

You will need to count how many zones there are. Sunny areas will be one zone, shady areas another, since they require different amounts of water, due to heat and evaporation. Other

factors that form "zones" are: Sandy vs. clay soils, slopes vs. flat land, flower beds vs turf areas, tropical vs desert plantings, and mixtures of any of these.

- Does it have a manual shutoff capability for valve and sprinkler maintenance purposes?
- Can each station be programmed with multiple start times or does it have a "Cycle and Soak" feature? This is especially crucial in locations with heavy clay soils or steep slopes, where applying too much water at once will flood or cause erosion.
- If you have several properties whose sprinkler systems you want to run from a single location (like a school district headquarters), you can choose a controller that has the capability to be run by a central control. You can buy the whole system together - the central control and controllers that go with it. Or, if you already have a central control system, you might only need to purchase extra controllers to add another property to it.

Orbit is the leading DIY irrigation manufacturer in the U.S. This controller is highly rated on Amazon. It does not include a sensor.

**Amazon Price:** \$47.00

**List Price:** \$54.99

- **Rain Bird IQ Central Control Systems**

The Rain Bird IQ Irrigation Central Control System provides cost-effective, multiple-site centralized irrigation control from a single computer. IQ empowers a Landscape Maintenance Contractor or Property Manager to monitor . . .

Here are a number of links that show different brands of Smart Controllers:

- **Approved by the City of Frisco in Texas: Qualifying Controllers**
- **From California's Metropolitan Water District: Weather Based Irrigation Controllers**
- **The Irrigation Associations list of tested soil moisture systems: List of IA-SWAT calibration reports for soil moisture sensors**

Enjoy the shopping, but remember that the real benefits of your new controllers will depend on how well you set up, test, and adjust them. Make sure you and/or your landscaper follow the controller's written instructions, then check the results several times afterward to make sure they are operating efficiently for the sprinkler system on your site.

### **More Information:**

- **California Irrigation Management Irrigation System (CIMIS) Calculation of Evapotranspiration (ETo) from sensor readings at over 100**

**weather stations throughout California.**

- **How to Practice Water Conservation**

**One of the threats most common to much of the world is the drying up of water. Here are ways individuals can use water efficiently, so there is enough for everyone.**

Last updated on May 16, 2014