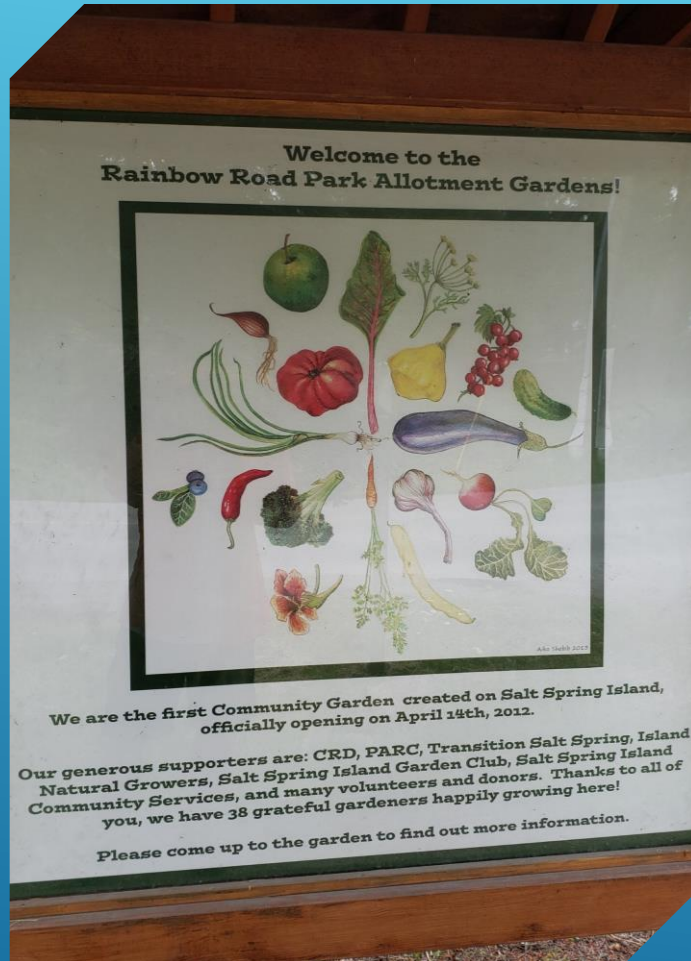


# RAINBOW ROAD PARK ALLOTMENT GARDEN

262 RAINBOW ROAD  
SALT SPRING ISLAND, BC

A PROJECT OF  
TRANSITION SALT SPRING

**Water Collection  
and Conservation**



# WELCOME TO RAINBOW ROAD PARK ALLOTMENT GARDEN!

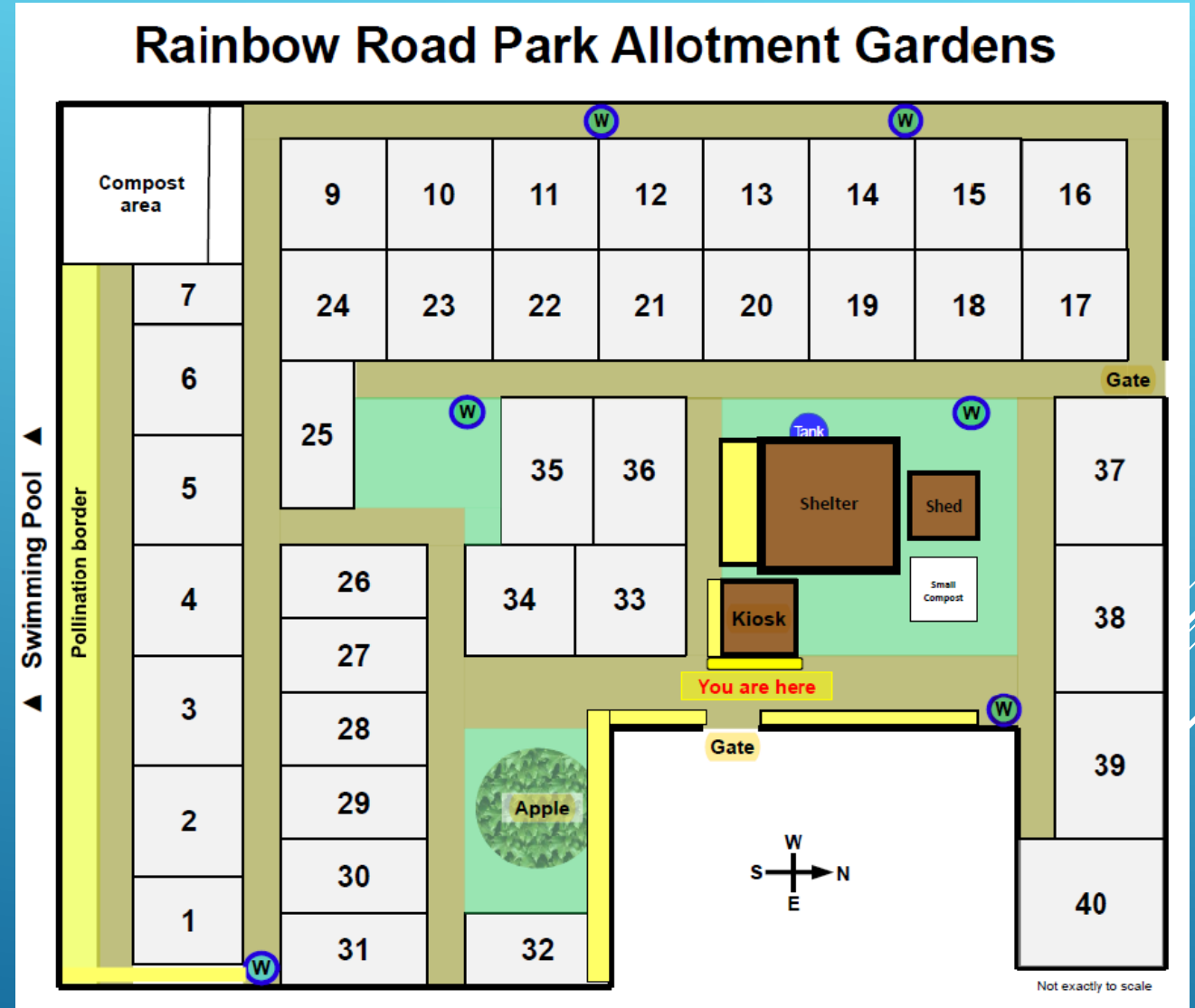
Established in 2012 by a community coalition of the Capital Regional District (CRD), Parks and Recreation Commission (PARC), Transition Salt Spring, SSI Garden Club, Community Services, and Island Natural Growers

CRD leases the land to RRPAG for \$1.00 per year

We use metered municipal water supplied by the North Salt Spring Water District.

# RRPAG SITE MAP

- 40 Plots on 1/4 Acre
- Individual & Community Plots approx. 250 sq. ft. each
- Pollinator Borders
- Large and Small Compost Sites
- Green Spaces
- Community Fruit Trees
- Shelter
- Storage Shed
- Site is Fenced







## RAINWATER COLLECTION

**Rainwater is collected from a public building. The Aquatic Centre on Rainbow Road. Top left**

**In 2020 only 30% of this roof is captured (approx, 334 sq.m or 3600 sq.ft.)**

**Rainwater is augmented by municipal water from North Salt Spring Water District**





## RAINWATER STORAGE

- Rainwater is stored in two 2500 US gallon plastic polyethylene tanks which are self leveling
- The tanks are connected by a 2" PVC pipe at the bottom which is buried. This was installed by Gulf Islands Rainwater Harvesting & Irrigation
- The tanks are on 2 x 4 wood frames 9 ft x 9 ft. filled with 1/2 in. crushed gravel
- 2.4 L of bleach is added to each tank to control algae growth
- Each tap point has 3 or 4 splitters from that point
- Additional municipal water can be added by common hose if rainwater is insufficient to maintain levels for the pump



## WATER PUMP

- $\frac{3}{4}$  Hp Burcam pump
- 3450 RPM; 20/40 lbs/pO<sub>2</sub> :18PSI at charging valve
- The water is pumped at 16 Imperial gallons/minute
- The water is pumped about 107 meters or 350 feet against a slope of 4.6m or 15 ft. elevation gain
- Using 1" pipe from the pump and changing to  $\frac{1}{2}$  " pipes to 6 outlets where there maybe up to four other splitters to allow more users
- Runs on 110 Volts from the Pool
- Is monitored daily by 4 volunteers who check water levels and add municipal water if required
- The pump is serviced annually and the filter is cleaned monthly
- It is drained and winterized with antifreeze for storage





## WATER COLLECTION - SHELTER

- **Water is also collected from a 16x12 ft. shelter**
- **Collected water is stored in a 500 Gallon container**
- **Water is then used from the bottom using watering cans**
- **Completely gravity fed**



### **HOSE WATERING DAYS**

#### **JUNE**

**MAX. 3 HOURS PER GARDENER**

2nd Tuesday	18th Thursday
4th Thursday	20th Saturday
6th Saturday	22nd Monday
8th Monday	24th Wednesday
10th Wednesday	26th Friday
12th Friday	28th Sunday
14th Sunday	30th Tuesday
16th Tuesday	

### **HOSE WATERING DAYS**

#### **JULY**

**MAX. 3 HOURS PER GARDENER**

2nd Thursday	16th Thursday
4th Saturday	18th Saturday
6th Monday	20th Monday
8th Wednesday	22nd Wednesday
10th Friday	24th Friday
12th Sunday	26th Sunday
14th Tuesday	28th Tuesday
	30th Thursday

## WATERING RULES AND CONSERVATION RECOMMENDATIONS

- **RRPAG follows North Salt Spring Water District guidelines**
- **Watering during summer is even days only, Maximum 3 hours**
- **Gardeners are encouraged to water the lower half of plants only to avoid excessive surface or air evaporation**
- **No fan sprinklers allowed**
- **Watering is encouraged before 10 am or after 4 pm to avoid heat of the day where maximum evaporation can occur**
- **Turn off individual taps as well as hose heads**





## WATER CONSERVATION GARDENING TIPS

- **Use of a water meter is encouraged to avoid over watering**
- **Best place to store water is in the ground (healthy soil stores up to 25 times its own weight in water)**
- **Add compost and humus to increase soil's water storage capacity**
- **Mulch with leaves, or straw to reduce surface evaporation**
- **Water deeply and less often once plants are established, maybe once every four days**
- **Water individual plants rather than a whole area**



## INTENSIVE SINGLE VARIETY PLANTING

- **Planting for maximum surface coverage**
- **Soil is shaded by the plants**
- **Greenhouse canopy for plants that require more heat or shade**





## INTENSIVE MIXED CROP – FULL GROUND COVERAGE

- **Create garden beds to reduce soil compaction**
- **Plant intensively to shade plant roots**
- **Welcome worms which create channels for water intake**
- **Avoid watering at hottest times of the day, to prevent evaporation**
- **Use of compost to trap water and lessen evaporation**





## STRAW MULCH AND TIERED GARDENING

- **Reduces surface evaporation**
- **Tiers increase growing space within existing plot boundaries**

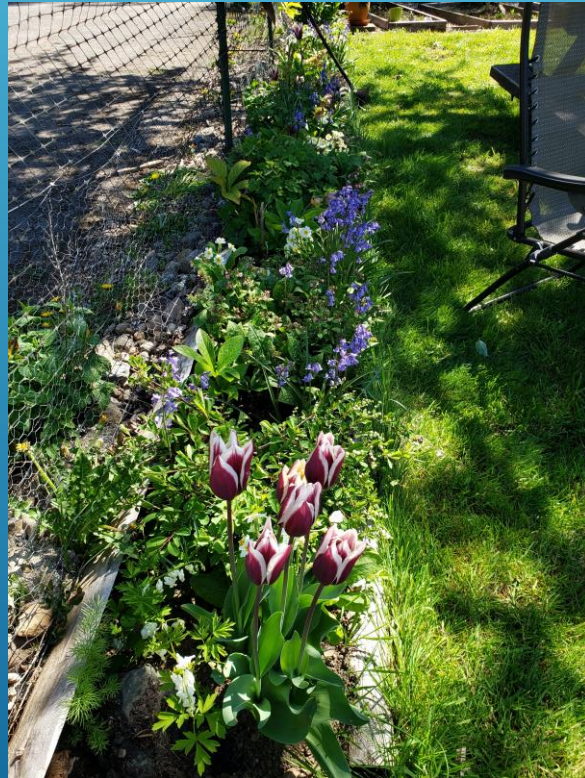




## LEAF MULCH

- **Use of leaf mulch to retain moisture in the soil**
- **Increases soil fiber**
- **Reduces erosion in winter**





# POLLINATOR BORDERS

- **Maximizes ground coverage**
- **Provides habitat for pollinators**
- **RRPAG has established 4 mason bee houses on the property**
- **We try to use native drought tolerant species**

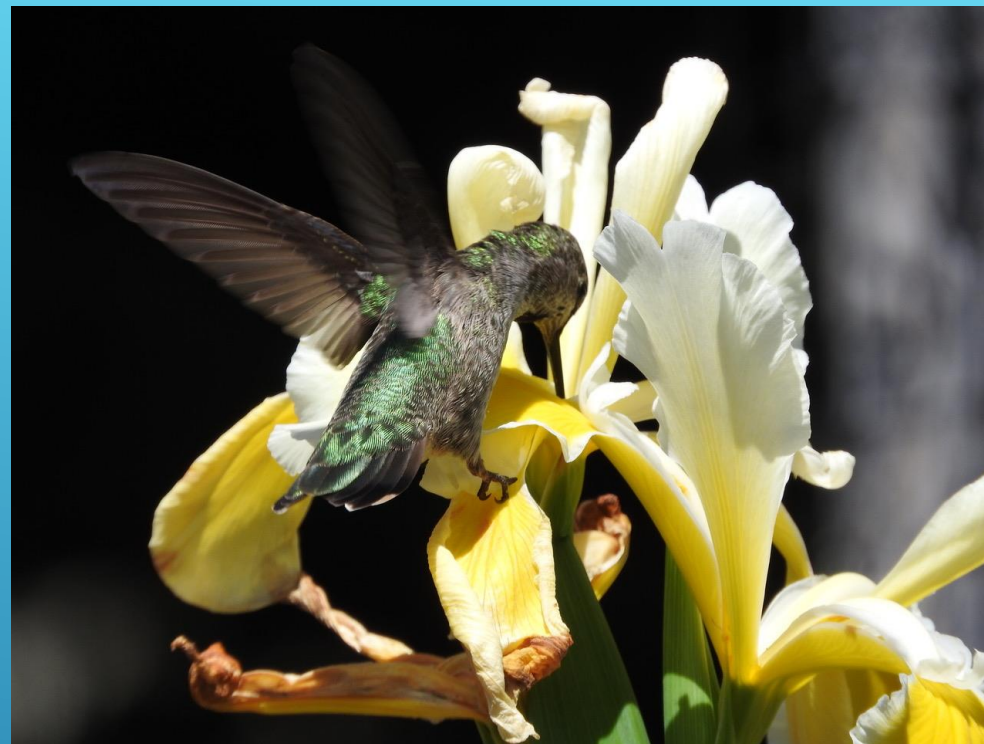


## WATER USAGE (gals.)

2016	53,880	n/a
2017	58,580	+8.7%
2018	51,410	-12.2%
2019	39,681	-22.8%

## THE RESULTS

- **Municipal water use is dropping**
- **2018 - an exceptionally dry year with no rainfall for 100 days; Water conservation rules enacted watering on even days before 10 am or after 4 pm**
- **2019 – drop in municipal water use; second tank installed**
- **2020 to June we have decreased our municipal water use by 43.1%. A savings of 13,875 US Gals or 52,523 litres!**



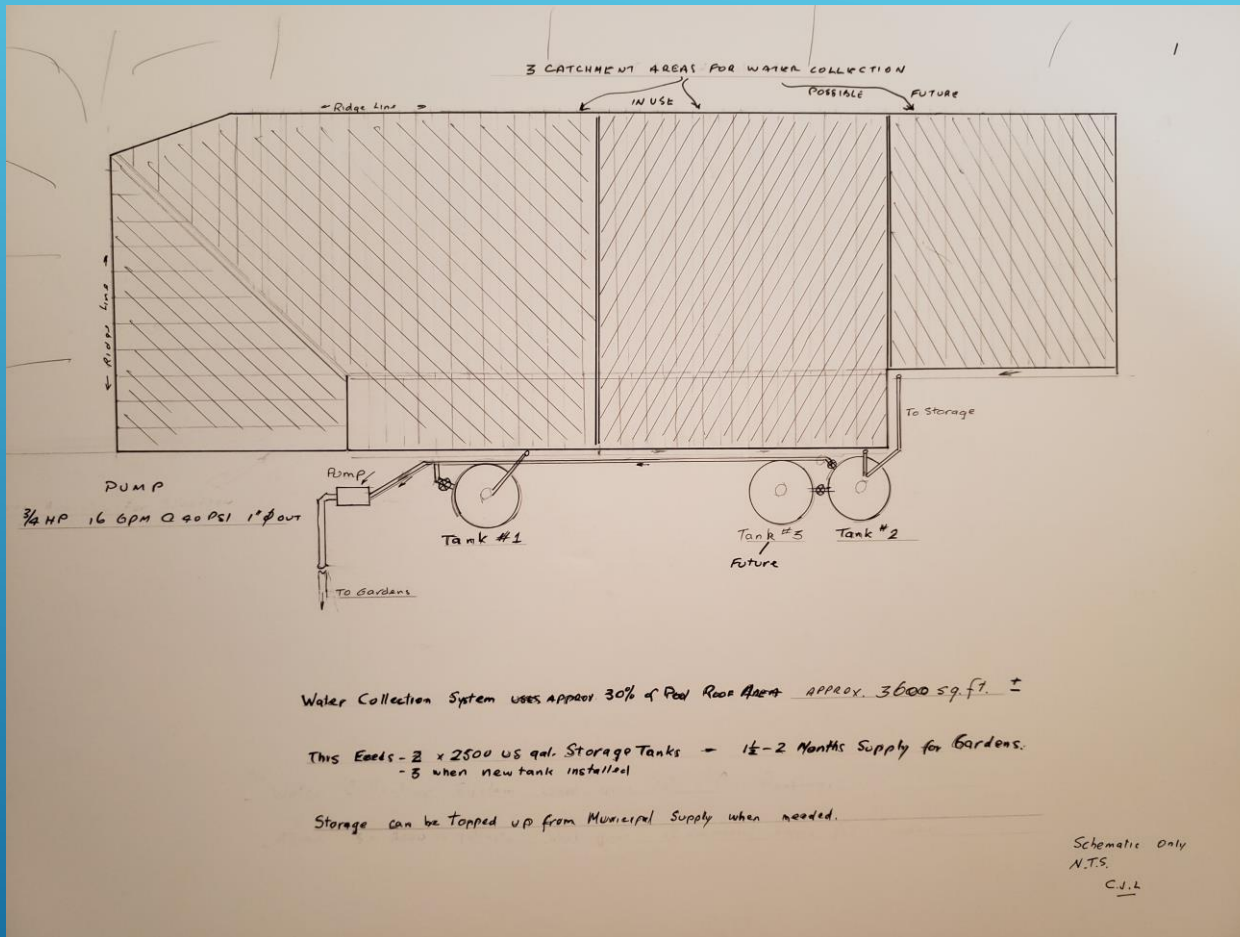
## FUTURE DIRECTIONS

- Utilizing more of the pool roof to capture and store of more rainfall
- Use small heaters in the tanks to allow storage of water in winter
- Shifting of planting times to optimize rainfall
- Use of native or heritage drought tolerate plants



## ADDITIONAL 2500 GAL TANK TO EXPLOIT MORE OF THE POOL ROOF

- Current capture is only 1/3 of the pool roof surface
- Addition of heaters to allow for year-round rainfall capture and storage



- ▶ Windsor Plywood
- ▶ Gulf Islands Rain Harvesting & Irrigation
- ▶ North Salt Spring Water District
- ▶ PARC
- ▶ Transition Salt Spring
- ▶ CRD
- ▶ Scott Simmons
- ▶ Sandra Smith, Macdonald Realty

“WITH GRATITUDE”

- ▶ All of Our RRPAG Members
- ▶ Special thanks to
  - ❖ Colin Lawler
  - ❖ Julian Elwes
  - ❖ Mark Cutten
  - ❖ Claire Davis
  - ❖ Jane Petch
  - ❖ Sue Savage
  - ❖ Mary Beckett
  - ❖ Shirley Ireland
  - ❖ Cecilia Pech
  - ❖ Roger Mah Poy
  - ❖ Shelley Currie



# BARRIERS AND THINGS WE HAVE LEARNED

**We have experienced CLIMATE CHANGES on Salt Spring;**

**Strong winds in winter 18- 2019; record droughts 2018 and in 2020 cool summer ; Climate is becoming more unpredictable and with greater fluctuations in rainfall**

**Water is our most valuable resource; We need to conserve it carefully for it to be sustainable on our island**

**Because we live in Canada there are different specifications and measurements that are utilized. Imperial vs US gallons; Metric vs British Imperial measurements**

**Make sure you have a map of your layout of underground hose or pipe systems. Indication of size and where connectors or shut off valves have been placed**

**Mark and bury water lines deep enough so they will not be struck by farm implements**

**Winterize your equipment..Water freezes and expands and can burst pipes**

**Seek help from professionals in the field**

**Stop leaks each drop counts!**

**Pandemic of Covid-19 ; Gardening helps mental health and provides safer interactions given social distancing parameters.**