

# **RIVERGLEN IRRIGATION MANUAL**

**August 2014 Revision**

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## **I. History of Ish Reservoir**

Larimer County Colorado contains a diverse geography including high mountains, foothills, and plains. The plains receive less than half of the mountain moisture and are, in effect, high deserts. Mountain winter snowfall and summer rain produces most of the water for the entire county, some of which flows naturally through the Cache La Poudre, and the Big and Little Thompson rivers.

As the number of settlers in the Larimer County grew, land along the rivers and streams became scarce and farms were established at increasing distances from water sources. Ditches were dug to bring the water from the rivers to farmers who needed it. Such efforts were expensive and required long hours of hard work, so by the 1870's cooperative irrigation projects began to be established. Groups of farmers banded together to provide the labor and investment capital necessary to undertake such large ventures. Soon irrigation companies were being formed to finance larger water storage and irrigation projects such as building ditches, damming small streams to catch spring runoff in small reservoirs and enlarging natural lakes to hold more water. During this time water priority was determined by the Doctrine of Prior Appropriation, which would become the standard use across the West.

In 1875, the local farmers in the area began construction of the now Ish Reservoir; at the time of construction it was called the Boulder and Larimer County Irrigating and Manufacturing Ditch Company commonly referred to today as Old Ish. Work on the reservoir was accomplished by the farmers during the winter months when they were not farming. The construction of the dam was accomplished with horse- drawn slips and wagons, and it took a total of 25 to 30 years to build the dam to a height of 15 feet. As the dam was raised and filled, the Ditch Company had to continually purchase land as the water level covered more area.

In 1902, the Boulder and Larimer Irrigating and Manufacturing Ditch Company and the Ish Reservoir Company (more commonly known as New Ish) entered into an agreement conveying the right and privilege of enlarging the reservoir. This right was purchased for the sum of "One Dollar" and paid to the Boulder and Larimer County Irrigating and Manufacturing Ditch Company. The Ish Reservoir Company agreed to increase the capacity by not less than one hundred and fifty million (150,000,000) cubic feet of water, and more, if practicable, over the above present capacity of one hundred and eleven million cubic feet of water making the total reservoir capacity of no less than two hundred and sixty one million (261,000,000) cubic feet of water. In the agreement it also states, "The Ish Reservoir will pay all cost for the enlargement, repairs and maintenance of said reservoir." All work on the reservoir had to be completed by the first day of July 1906.

## **II. HISTORY OF RIVERGLEN IRRIGATION SYSTEM**

Back in the mid 1970's when Riverglen was under development, Tull and Associates acquired water rights in Old Ish. This acquisition resulted in the ability to distribute a share of water to each of the original Riverglen lots.

Irrigation water at that time was only used by a few people in the development and by Troy Buehler, who farmed the land northwest of the development. At that time Troy maintained the main feeder ditch from the Ish Reservoir to our development and the main ditch throughout the Riverglen development. Every year Troy would have to burn ditches and pull ditches to clean out the sediment and debris from the prior irrigation season.

About 1979 the people in the development banded together to help Troy with the cleaning and burning of the ditches. However there were several lots that could not get water. An irrigation committee was formed at that time to improve the irrigation system as best they could with the limited funds available. The developer did provide pipe for the lots along highway 287 so water could be brought down over the steep hill. A group of willing neighbors got together one weekend and installed the pipeline. Several diversion boxes were also installed that year. With the use of the neighborhood tractors and a borrowed ditcher, additional laterals were pulled to get water to more lots. As hard as they tried, these neighbors could never get water to all of the lots.

Over the years a few of our neighbors in the development have taken it upon themselves to help improve the system by building diversion boxes, adding pipe in several areas and cleaning and burning ditches each spring. Our thanks go out to these people for being GOOD NEIGHBORS.

In the spring of 2004 a new underground pipeline was installed between Ish Reservoir and Riverglen. This was a significant improvement decreasing the amount of water lost to absorption in the open ditches and bringing water into the development within minutes. In the spring of 2005 an underground piping system was installed to provide water to each and every lot in Riverglen.

**THANK YOU TO ALL WHO HAVE MADE THIS POSSIBLE. WE ENCOURAGE EVERYONE TO ENJOY THE BENEFITS OF IRRIGATION!**

Use of this system is a benefit to all homeowners in good standing with Riverglen HOA which includes dues and all other responsibilities listed in the covenants and by-laws. The Riverglen Home Owners Association owns the 61 shares of Old Ish and also owns the distribution system throughout the subdivision. Tract A (known as the 4 "school lots") was not given access to the HOA Irrigation water as specified in the contract when those lots were allowed to be developed. The 4 "school lots" do, however, have provisions for using the system once they have met their additional requirements and have paid for leased water to run through the system.

The 61 original lots do not own the 61 shares of irrigation water and therefore do not have the ability to lease or give away any water that Riverglen HOA has listed as available for their lot. At the start of each irrigation season water that could be available to lots that are not eligible for using that water will be set aside. Once those lots meet the qualifications for using water, water will be made available to that lot in an amount equal to the remaining months left of the irrigation season (season is 5 months May-Sept.).

In August of the irrigation season there will be a reallocation of unused water if there is sufficient water left from the water that is set aside. Any water that is not being used by a lot that is eligible to use water will be reallocated at this time unless notification has been given to the Irrigation Committee that they intend to use the water.

### **III. IRRIGATION COMMITTEE RIGHTS & RESPONSIBILITIES**

#### **The Irrigation Committee is responsible for:**

- Homeowner Training
- Communication with the ditch company
  1. For water calls during the irrigation season
  2. For emergency calls to the ditch rider when necessary
- Recording Water use
- Purchase or Lease additional water when available and communicate the availability and cost to all homeowners
- Scheduling Irrigation Committee meetings that are open to all HOA members (not less than twice per year)
- Prepare or Provide information for an annual budget
- Perform distribution of water per the agreement with Big Elk Meadows Association (BEMA)
- Assisting homeowners with irrigation problems
- Location of the irrigation pipe and valves for homeowners before homeowner digging or construction
- Distribution / Allocation of RGHOA owned shares of water to qualified HOA members
- System Maintenance and upgrades

#### **System Maintenance and Upgrades**

- Irrigation Pump
- Pipelines
- Main Valves
- Assisting owners with meter repair or replacement when needed.

#### **Homeowner Training**

- Training Sessions- presentation and sign-off
- Signed Easement Agreement
- Irrigation Manual- presentation to each new homeowner and new user (not previously irrigating)
- Distribution Map- valves, gates, pump as well as names and address (location) of all current homeowners.
- Specific limitations peculiar to certain lots.

#### **Spring Startup and Cleanup**

- Weir Maintenance and Cleanup  
In April, the Irrigation Committee will perform maintenance and clean the weir as deemed necessary. The weir and the grates in the weir will be cleaned of all debris at which time they will then be reinstalled back into their proper positions.
- Close Pipeline Drain on Buehler's Property if open (leave closed unless flushing is needed)  
An Irrigation Committee member will walk from the weir down to the drain valve and turn it clockwise to close the valve (1/4 turn) prior to running any water. Keep the key by the weir.

- Close Drain valves  
(See valve A on map for location) Northwest corner  
  
(See Valves B1, B2& B3 on Map- Located on Jan Wood's property, between blk 4 lots 2 & 3)  
  
(See Valves C1& C2 on Map- Located at Sewer Plant, C2 is BEMA valve)  
  
(See Valves D on Map- Located on Tom Bieri's property, blk 4 lot 8)  
  
(See Valves E on Map- Located on Vigil's property, blk 2 lot 10)

### **Distribution box Maintenance and Cleanup**

- Clean debris from distribution box- flush with valve
- Close drain on distribution box
- Service irrigation pump as required
- Uncover pump and inspect for visible damage
- Check if pump rotates freely
- Check Murphy switch for proper operation

### **Charging System and Inspection for Leaks**

When water is first released into the system the Irrigation committee will walk the pipelines and inspect for leaks and ensure all Homeowner valves are closed.

### **Fall Season Shutdown of System**

- Check weir for necessary maintenance  
  
Clean weir and grates  
Make sure all grates are reinstalled in the proper locations
- Open Pipeline Drain on Buehler's Property **only if flushing is needed**. Pipe is buried deep enough it should not freeze.  
Turn valve counterclockwise to open drain valve. Leave key in at weir.
- Drain Distribution Box if necessary
- Service Irrigation Pump  
Cover pump and service as required
- Open all Drain Valves to Drain System. Once drained close most of the way to keep rodents out but allow additional drainage.

### **Violation/Misuse of Irrigation System**

- Written Notification to Homeowner by HOA Board
- Second Violation Notification
- Suspension of Irrigation Rights

#### **IV. HOMEOWNERS RIGHTS & RESPONSIBILITIES**

Homeowners, in good standing with the River Glen HOA, of the original 61 lots have a right to use the irrigation system for water delivery. In good standing includes but is not limited to:

1. An Irrigation Easement agreement on file with Larimer County
2. Paid up tap fees and any other fees/dues owed to the RG HOA
3. Have attended or been trained on using the Irrigation System

Homeowners have a right to use the water allocated by the Irrigation Committee on their own property. Homeowners do not have the right to reassign, lease or sell HOA owned water to another River Glen homeowner or parties outside the association. Homeowners may lease additional water from entities outside the HOA but are required to perform this transaction through the Irrigation Committee. The Irrigation Committee will seek out water for lease each year.

Homeowners of the “school lots” at the addresses listed below may use the irrigation system after paying a \$2500 tap fee and \$500 for the installation of a release valve and meter. Homeowners of the “school lots” do not, and shall not, have any access to the 61 shares of water owned by the River Glen Homeowners Association. The homeowners of the “school lots” may lease water through the Irrigation Committee when available.

“School Lots” are:

1920 River Glen Dr  
2012 River Glen Dr  
2028 River Glen Dr  
1318 River Glen Way

#### **Protect System- periodically check for leaks- they should be obvious**

- Valves and Valve Boxes (open and close seasonally)
- Meters- remove and replace batteries seasonally  
Remove & clean + lubricate paddlewheel before start of season.

**Please avoid running lawn equipment, tractors or any heavy equipment over valve boxes. “GENTLE ON THE VALVES”**

#### **Damage to Irrigation Valve/Meter Assemblies**

- Homeowner will be responsible for cost of replacement if damage is due to negligence. Please contact the Irrigation Committee if any excavation work is being considered.

#### **Ordering Water- Normal Season is May1-September 30<sup>th</sup>**

- Sign-up Sheet & Water Summary. A Sign-Up sheet is located at the Irrigation box on 2E. Water orders will be turned in once a week and must be submitted by 5:00 PM Wednesday for the weekend water run the following Friday-Monday. A summary of those watering will be posted prior to the Friday morning start.
- We are restricted to order minimums of 40 inches and running the same amount for consecutive days of the weekend run. Water availability for a specific day of the weekend run will depend on meeting these criteria. Sign up for water with this in mind being as flexible as possible with the day that you can take water.

- Include a phone number you can be reached at for problems with the sign up day as well as any problems that arise during your irrigation time. Note your flexibility of days in case adjustments need to be made.

**Website- [www.riverglenberthoud.org](http://www.riverglenberthoud.org)**

Riverglen Subdivision now has a web site address with association news.

### **Water Flow in “inches”**

All association members will have to experiment with water quantities ordered. It is recommended you start with a lower amount and work your way up until you reach a point where you have enough to cover your property without wasting water.

One inch of water = 9 gallons per minute.

Water will run for a period of 24 hours so please adjust your watering accordingly or share with a neighbor(s).

Use the conversion chart when ordering your water in inches and adjust valve to the correct GPM (gallons per minute).

### **Meet at the irrigation box at 6 a.m. on the day of irrigation**

Homeowners are required to meet at the irrigation box on County Rd 2E on the day they are irrigating. This is to assure that the pipes are filled before starting irrigation and that all homeowners irrigating that day know the other homeowners that are irrigating. After the pipes are filled and the irrigation box is at the overflow level, homeowners that have ordered water that day may begin irrigating. It is recommended that the homeowners irrigating on a particular day communicate whether they will be home during irrigation and provide contact information.

### **Share the water that is available with the other homeowners that have ordered water.**

Occasionally, the water ordered may not exactly match the water delivered to River Glen. If less water is available, then all people irrigating on that day will need to reduce their water use. Meeting at 6 a.m. and looking at the Summery Sheet will help you know who else is irrigating for trouble shooting the problem.

The Irrigation Committee is not responsible for day-to-day policing of water use, therefore it is expected that each homeowner take responsibility for working with their neighbors to have an equable division of the water available, which stated earlier, may not match exactly with the water ordered. Be considerate and share what is available. If there is a significant water discrepancy, see the troubleshooting section to determine if there is a solution before contacting an Irrigation Committee member for help.

### **Turning water on in a timely manner**

The Homeowner will be responsible for turning his/her water on between 6 AM and 6:30 AM (**possibly later**) depending on full system. It is very important that you abide by this time constraint so that we can maintain a fully charged irrigation system at all times. Meet at the Irrigation box in the morning to confirm a full system before you open your access valve or turn the PUMP ON. You will also be able to see who else is running water that day for any issues that arise. Check the box water level several times during your 24 hour run. Should the water flow fall short, contact others running water that day to determine where corrections need to be made. **If no needed corrections can be found and the cause of reduced water cannot be determined then everyone watering that day will need to reduce their flow so that the reduced amount is split by all.**

### **Turning water off in a timely manner**

The Homeowner will be responsible for turning off his/her water at exactly 6:00 AM. It is very important you abide by these strict time constraints so the next user will have water immediately available for their use and so that the piped system does not drain down.

### **You are Responsible for the system on your property**

It will be the Homeowner's responsibility to check the irrigation system on his/her property. If you cannot make the necessary repairs or corrections report any malfunctions or leaks to the Irrigation Committee. If the flow meter fails to register, please DO NOT attempt to remove the paddlewheel assembly during the irrigation season as there can be significant pressure in the pipe.

If there is no digital display check the batteries and replace them if needed. An irrigation committee member can help or give suggestions.

Each homeowner will need to open his/her distribution valve at the end of the irrigation season after the system has been shut down. Let it drain for a few days then close enough to keep rodents out but still allow drainage should any water accumulate at that site.

**Remove the batteries at the end of the season to prevent corrosion.** Replace again in the spring before irrigating.

## **Troubleshooting**

### **Loss of water or low flow issues**

1. Check your release valve – sometimes debris clogs the valve. Open fully for a few seconds then set to proper release amount.
2. Check the screens in the box for debris
3. Check the screens at the main ditch weir for debris
4. Check with the other people irrigating to see if a pipe has broken or they are inadvertently using too much water
5. If none of these correct the issue, ask the other people irrigating to reduce their flow

### **Frequently asked questions**

Question: Why does the HOA, and not individual homeowners, own the water?

Answer: When the subdivision was established the irrigation rights were assigned to the subdivision in the name of the HOA.

Question: Why doesn't the HOA and the Irrigation Committee let homeowners reassign or lease their water?

Answer: The HOA expects that some homeowners will not use irrigation water and this water is used to:

- Add a few inches to an order to make consecutive days have an equal water order (this is a requirement from Ish Ditch company)
- Equally allocate water at the end of the season to all members that use irrigation water

## **V. Attachments**

Conversion table for ordering water: Inches to Gallons Per Minute (GPM)

Example of Water Sign-up Sheets

Example of Water Summary Sheet

## **VI. Maps**

Pipe and valve general locations within River Glen (separate files as pdf)

## **VII. Irrigation Committee Members**

The Irrigation Committee Members as of November 2013:

Ken Huson 532-1932, John Prock 532-3564, Gary Klug 532-3479,

Paul Simpson 532-2874, Bill Vaughn 532-2090, Jim Young 532-3200, Dean Ketterling 532-2821,

Derk Mewes 532-0387, Daryl Musser 532-2053

## Attachment 1 Water Conversion Table

### Inches to Gallons per Minute

- Order water by Inches, Set Meter by GPM
- Most common amounts ordered are 5 & 10 inches
- Remember water will run for 24 hours

Flow in Inches	Gallons GPM
5	45
10	90
15	135
20	180
25	225
30	270
35	315
40	360
45	405
50	450

## Attachment 2 Example Sign-up Sheet

								Allotment Normally 40" /Share
								2014 RiverGlen Water Sign Up
								Extra leased water by members added when transferred
Home Owner	Start Bal.	YTD Use	Avail. Bal.	Fri.	Sat.	Sun.	Mon.	INITIAL & Date & Phone
Kuehn Blk. 1	0		0					Names in Blue need to complete Requirement for water **
Brown	0		0					Names in Blue need to complete Requirement for water **
Vaughn	40	-15	25					7-11,
Huxford	40	-20	20					6-28, 7-26,
Towrey	40	-30	10					6-28, 7-26,
Cronin	40	-12	28					6-29, 7-20,
Gatt	40	-14	26					6-29, 7-20,
Bellet	40	-14	26					6-29, 7-20,
Edelmaier	40	-20	20					6-29, 7-25,
McGee	40	-14	26					6-29, 7-20
Arreola	0		0					Names in Blue need to complete Requirement for water **
Prock Blk. 2	40	-20	20					7-11, 7-25,
Nieto	40	-15	25					6-28, 7-20,
Johnson	40	-25	15					6-28, 7-11, 7-25,
Klein	40		40					
Geworsky	0		0					Names in Blue need to complete Requirement for water **
Dziuk	40		40					
Mewes	40	-10	30					6-28,
Petersen	40	-5	35					7-20,
Rogers	40		40					
Vigil	40		40					
Till Blk.3	40		40					
White	40	-15	25					7-5,
Sheets	40	-10	30					6-28,
Phillipp	40	-20	20					7-6,
Young	40	-20	20					7-6,
Hart	40	-20	20					7-11,
Meyer	40	-5	35					7-26,
Smith, Tom	40	-10	30					7-5, 7-26,
Shaw	0		0					Names in Blue need to complete Requirement for water **
Linssens	40	-20	20					6-28, 7-25,
Hargrove	40	-15	25					6-29, 7-5, 7-11,
Simpson	40	-30	10					6-29, 7-20,
Huson	40	-30	10					6-29, 7-20,
Canby	40	-15	25					7-26,
Godfrey	40	-15	25					7-11,
Klug	40	-12	28					7-6, 7-25,
Riley/Sheppard	40		40					
Stone	40		40					



## Attachment 3 Example Water Summary

(Posted to list those that have ordered water for period noted)

### Water Summary July 25 to July 28, 2014

#### Friday

Gary Edelmaier	10"	PUMP
John Prock	10"	PUMP
Jamie Johnson	10"	PUMP
John Linssens	10"	
Gary Klug	7"	
Julia Stapp	5"	
Elizabeth Harris	5"	
Misc.	8"	

#### Saturday

Katie Huxford	10"	PUMP
Bob Towrey	15"	PUMP
Laura Meyer	5"	
Tom Smith	5"	
Scott Canby	15"	
Tom Spangler	10"	
Misc.	5"	

#### Sunday