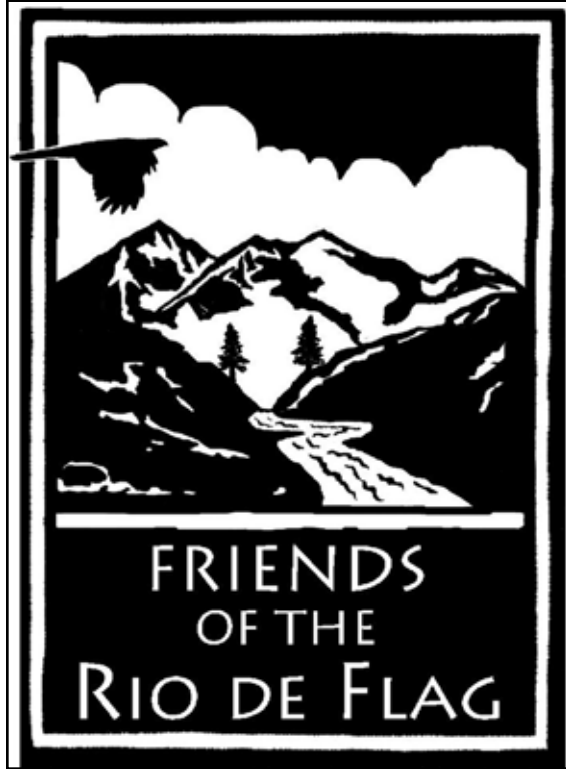


FRIENDS OF THE RIO DE FLAG



www.friendsoftheriodeflag.org

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Mission Statement and Goals

Kathleen Satterfield, Jim Logan, Collis Lovely, and Jack Welch have formed the

FRIENDS OF THE RIO DE FLAG

an organization committed to:

Promoting the Rio de Flag's natural stream system as a unique and valuable natural resource, asset, and amenity for the citizens of Flagstaff, Arizona, and the surrounding community.

As we find our footing, the group is grappling with many issues that affect Flagstaff's premier stream. Ideas that will surely gain momentum as we move forward include restoration, clean up, and guided educational hikes. More specifically, the goals of the organization are to:

... to protect, restore, clean up, and improve the Rio de Flag and its tributaries to maximize their beauty, educational, and natural resource values, including the riparian habitats they provide.

COORDINATOR'S CORNER

FRIENDS OF THE RIO DE FLAG is an idea that began percolating in my brain just after I moved to Flagstaff in 2005. When I'd mention the Rio de Flag in conversation, many seemed unaware that it existed – which took me back to my years with San Diego Audubon and hearing the same comments about the San Diego River (also frequently dry).

So seeing this idea for FRIENDS OF THE RIO DE FLAG become a reality with the help of a few dedicated friends, and finding so many enthusiastic kindred spirits ready and willing to add their voices to our new choir, has been a truly gratifying experience for me.

I moved here from the San Diego area, which is where I had the privilege of working with another group of dedicated volunteers – the Board of the San Diego Audubon Society. From them I learned what I know about grassroots conservation. An experience I had there pushed me to put my energy into helping form this group.

That experience began when I was asked to represent Audubon on a committee working to clean up and revegetate a small section of the San Diego River. One evening, a fellow Audubon board member called to say he thought it would be a good idea to form a coalition of all the groups doing work along the river so we could share ideas and help each other. He wanted me to take this idea to the group I was working with and see if they agreed.

Well, they did, as did the others! And a new group was formed: the San Diego River Coalition, which grew to include not just those of us doing conservation work on the river, but also the hotels and other business that were located along the riverbed. They now have 60 member organizations and an untold number of individual members. From that came the formation of the San Diego River Park Foundation, which is the formal non-profit organization. The Coalition acts as a citizen advisory committee to the Foundation.

None of this happened overnight or without the blood, sweat and tears of a core group of exceptionally committed volunteers. From that experience I saw first-hand what can happen when one person suggests an idea to other likeminded individuals.

So please don't be afraid to put forth your idea to our group – you never know where it will lead!

- Kathleen Satterfield.



This lovely and much-loved section of the Rio de Flag will be buried in an underground pipe if the present plan goes forward.

DON'T BURY OUR RIVER!

***New City Council And Mayor
Vote for Army Corps of Engineers Plan
to Underground the Rio de Flag
Through Downtown***

Tuesday, May 5, 2009, Mayor Sara Presler and the Flagstaff City Council voted to approve a million-dollar change order for the City/U.S. Army Corps of Engineers Rio de Flag Flood Control Project. 2,260 feet, or almost a half mile of the Rio de Flag from Bonito to Route 66, will be buried in a storm sewer pipe 28' wide x 7' to 8' high. This section of the Rio runs past City Hall, the Flagstaff Public Library, Wheeler Park, portions of the downtown residential area, and near Marshall Elementary and Flagstaff Middle schools.

The vote confirmed the city's intent to move forward with the Corps' plan to underground the Rio, a decision that the previous city manager, mayor and city council requested and approved on Jan 23, 2006. This changed the Corps' design from an open channel system to a storm sewer pipe.

The flood control project is a cost-share project between the City of Flagstaff and the Army Corps of Engineers. The Corps will design and construct it in order to contain "100-year floods," thereby removing homes and structures from FEMA's regulatory 100-year floodplain and from regulations tied to lands within it. A "100-year flood" is based on statistics. It

is defined as a flood that occurs an average of once in 100 years or has a 1-in-100 chance of happening during any one year.

FEMA (Federal Emergency Management Agency) regulations apply to communities that participate in the National Flood Insurance Program, which Flagstaff does. These regulations require structures on properties within a 100-year floodplain that have federally insured mortgages to carry flood insurance. Vacant properties are generally not permitted to be developed and existing structures are not permitted to be improved by more than 50% of their current value. These requirements are designed to protect property and lives and to minimize the cost of flood damages. However at the same time, the requirements also prevent new structures, redevelopment, or substantial improvements to structures within the floodplain area.

These limitations (regulations) would be eliminated by implementation of the project, which would allow unrestricted redevelopment of all properties now located within the floodplain and thereby increase future tax revenues to the city. The removal of the restrictions that the regulations impose on properties within the floodplain is one — if not the major — motivation for the city wanting this project to be implemented.

We do not disagree that this would be a good thing overall for everyone in the community.

The Corps' original design (proposed in 2000) for this section of the Rio was for an above-ground, open channel along the alignment of the undersized open channel that exists today. This would require a channel width of 95 feet as opposed to the existing 40-foot easement. It would require land acquisition, but so would the underground option (although not

quite as much).

The city's primary concern suddenly arose when the Corps announced in 2004 that — based on 30% plans — the total project cost estimate had increased from \$12 to \$21 million for the city's share and the Corps could not cost-share for the construction of bridges. According to the Corps, the open channel plan would require building eight bridges at an estimated cost to the city of \$13 million dollars. The city reacted by telling the Corps that they could not afford this increase and did not want the project unless the Corps could come up with another design that could be totally cost-shared. Thus, the underground option came into being.

The City did hold two public meetings in 2005 prior to the approval of this design change. According to City staff, public opinion was evenly split between the two options. Flagstaff City Council approved the option with the least cost to the city. The City of Flagstaff has recently (2009) received 90% plans from the Corps. However, we have not yet heard what the latest cost estimate is.

We Friends of the Rio are opposed to undergrounding this section of the Rio. We have written to the present mayor and city council members regarding our concerns. In relation to the May decision regarding additional expenditure on the project, we e-mailed the mayor and city council objecting to its approval and requesting that the open channel option be reconsidered before committing more money to undergrounding the Rio.

At the City council meeting, the item was removed from the consent agenda. We believe that this was at least partly because of concerns raised by Friends of the Rio. This allowed for discussion and public comments about the undergrounding and also forced a specific vote by the council on just this issue. As a result, Collis Lovely, representing the Friends (Chairman of Friends of the Rio Daylighting Committee) was able to make a presentation on record, explaining our concerns and our desire to keep the Rio de Flag above ground as a public resource and city amenity for the scenic, recreational, and educational values and wildlife habitat that it provides (*for the full text of Collis Lovely's comments to the City Council, visit our website at: www.friendsoftheriodeflag.org*

Councilmember Swanson also voiced concerns about the undergrounding. A 45-minute discussion between the city council and City of Flagstaff staff ensued regarding the plan to underground the Rio. Ultimately, the Council voted



A glimpse of nature on a wintry day in town, and vital year-round habitat for birds and other wildlife.

to approve the million dollar change order with only one dissenting vote (Councilman Swanson's).

Our concerns about the project are now a matter of public record. However, it was clear that the City of Flagstaff was not willing to consider a change in the current design.

The goal of Friends of the Rio Daylighting Committee is to keep our river above ground. The committee is developing an outreach program to inform the public of the plan to underground the Rio. Our goal is to build a groundswell of public opinion that the mayor and city council cannot ignore and to get them to restore the open channel design, or to at least reevaluate it. We believe there are modifications that were not adequately considered when the Corps prepared a comparison of the cost of the two designs.

Of major concern to Friends of the Rio are the long-term impacts of undergrounding. According to City staff, the life of concrete pipe can be as long as one hundred years, which means that this section of the Rio could be entirely lost to the public for that long. The other long-term factor not considered is the cost of maintenance and replacement of the pipe when it does ultimately deteriorate and fail, whether that is in 50 or 100 years. Once built, the project will be the city's responsibility. The much more expensive future cost of replacing or "daylighting" the Rio will be passed on to future generations.

Across the country and the world, other cities are currently "daylighting" streams that had been put underground — the cost of replacement and maintenance being one of the primary driving factors. Recognition of the multi-resource value of rivers as a community amenity has been another force in the "daylighting movement" across the country. We don't want to see the City of Flagstaff lose this portion of the Rio de Flag for the next 100 years by burying it in an underground pipe.

We also question the need for eight bridges, three of which are pedestrian bridges. Why build pedestrian bridges at all? During a rare flood event, people will be attracted to watch the flood waters. If they need to cross the channel on foot, why can't they just use one of the adjacent street bridges? The other question is: do we really need a bridge at every street crossing? What about a bridge at every other street with in-between streets becoming cul-de-sacs? Another option that should be considered instead of bridges are inexpensive at-grade crossings, a common practice in a Corps-designed flood control

channel in Scottsdale, Arizona.

Other issues that we feel were inadequately considered when making the undergrounding decision are public safety issues associated with a half-mile long storm sewer pipe/tunnel in a residential area. Can anyone be certain that kids, pets, and wildlife won't find ways into this half-mile long channel? How will they get out? There are three public schools in the immediate vicinity of the entrance to the proposed pipe. Can the city keep transients from using this pipe/tunnel and trash from accumulating at the entrances and becoming a public nuisance and flood hazard?

We also wonder if all the benefits of having an open stream running through our downtown area have been considered. The benefits would be tremendous, even as an open flood control channel. It could be a beautiful, green, open space area for local residents, citizens, and visitors to enjoy. Many cities have found incredibly imaginative ways of using their streams and rivers to create greenbelts and parks for their citizens. Many are similar to our Rio de Flag as in Santa Fe, New Mexico and San Diego, California where the rivers aren't always wet.

Following large floods in the 1960's, Denver, Colorado needed to reconstruct its storm sewer system. However, they chose an alternative to putting it underground and created a system of above-ground drainage channels landscaped as parks for sports, walking, cycling, and picnicking. Denver's solution has been around for three decades and is highly successful.

Another benefit of an open stream channel is that it provides water when available as well as habitat for wildlife. Without access to the open stream channel there cannot be water, a food source, or shelter for birds and other wildlife at any time of year. And in addition to providing life-sustaining habitat for birds and wildlife, an open stream would clean storm water runoff and recharge our aquifers.

After the initial investment, an open channel would not collapse, leak or deteriorate and would not require the future acquisition of adjacent property to repair, replace or "daylight" as an underground concrete pipe would.

And last but certainly not least, are the myriad of physical and psychological benefits of an open stream for people. There is a large body of psychological research showing that direct contact with nature leads to improved mental health for both children and adults.

MORE WATER = MORE TREES = LESS CRIME

Benefits include stress reduction and increased sensory awareness. Studies also show that nature is a trigger for “peak experiences,” experiences that are so strong that they shape or change a person and are remembered all their life.

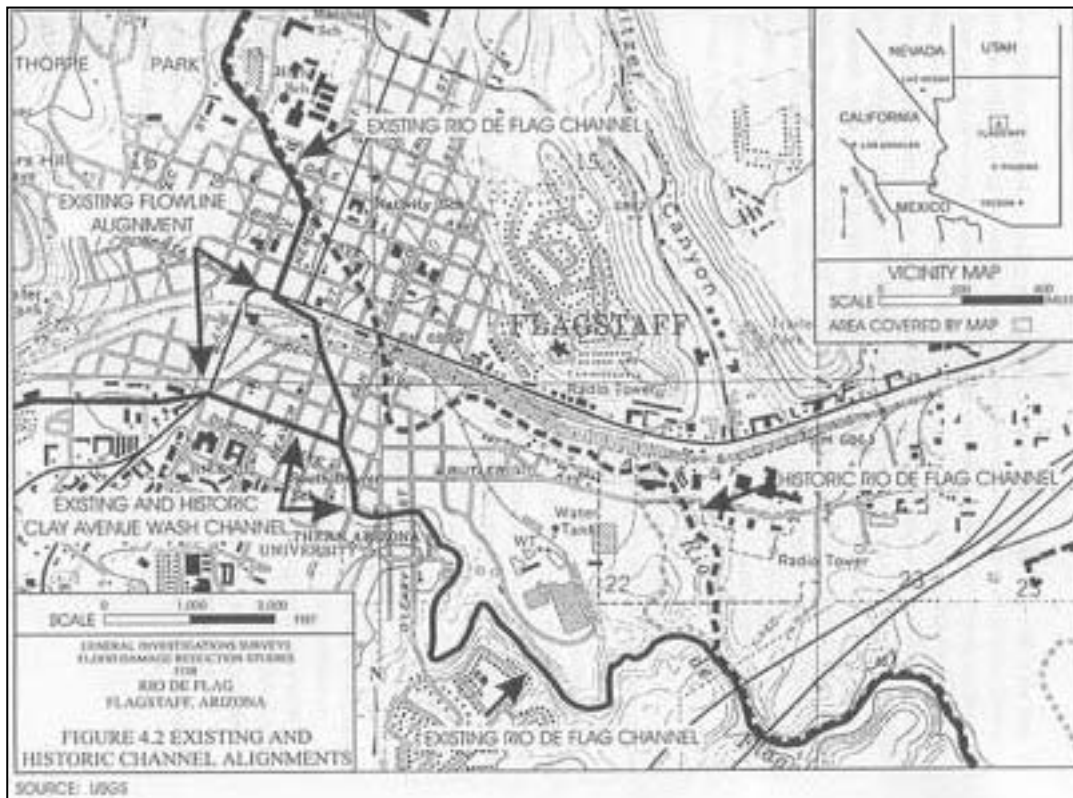
A study done in Chicago’s Robert Taylor Homes, the largest public housing development in the world, showed that apartment buildings surrounded by trees and greenery had dramatically fewer crimes against people and property. Those living amongst the greenery experienced 48% fewer property crimes and 56% fewer violent crimes! This study also found those living among trees had significantly better relations with and stronger ties to their neighbors.

They had more visitors and socialized with their neighbors more, and generally had a much stronger sense of community than did those living in apartment buildings without open green space.

For these reasons and so many more, Friends of the Rio de Flag feel it is extremely important and only prudent for the City of Flagstaff to think long and carefully about the consequences of putting the Rio underground and to think of all the benefits, both tangible and intangible, of leaving our river in the daylight for all to enjoy. Imagine being able to walk your dog, to bicycle, to sit and read under a shady tree, to enjoy the view of the Peaks, to watch a natural flowing stream, or to take your kids to play on a path that meanders along the Rio de Flag.

Can you put a price on that?

— Kathleen Satterfield & Collis Lovely.



Existing and Historic Channel Alignments of the Rio de Flag. Source: USGS

FREQUENTLY ASKED QUESTIONS ABOUT THE RIO DE FLAG

Q: *When was the last flood event in the downtown area?* A: 1993 and 1938, per the Army Corp of Engineers Final EIS of 9/2000. The Corps estimates 25-year events (assuming flooding means flow overtopping the banks of the Rio). There was a 10-year flood in 2006 when the Rio flowed for several months but did *not* overtop its banks. The Corps report also reported 18 floods since records began in 1888. There is no indication of whether a 100-year event has ever occurred.

Q: *What was the original path of the Rio?* A: Before 1890 the Rio ran southeastward from what is now Francis Short Pond just west of Flagstaff Middle School, to Aspen Avenue between Humphreys and Beaver streets. It then turned south under the 1882 railroad trestle. South of Phoenix Avenue, it curved east-northeast and then paralleled the railroad southeast for a mile before it dropped into the deep canyon which can be seen on Butler just east of Warner's Nursery. Not exactly as shown on the Army Corp of Engineer's map above right, but per the Sanborn Fire Insurance maps issued in 1890 and 1916.

Q: *When was it channelized into its present location?*

A: Most of the present course of the Rio was changed when it was redirected into a series of trenches excavated between 1892 and 1901. The Rio north of the railroad tracks was relocated in an attempt to shift the damaging floods away from the center of the commercial downtown area. Flagstaff Incorporated in 1894. In April of 1894, to keep it from traversing the Southside Brannen Addition, the Rio was redirected to a shallow and narrow 2800 foot-long trench that ran southeast from Cottage to a small, unnamed tributary near O'Leary and Ashurst Streets that drained into Sinclair Wash. Take a look at the Rio map on page 6 !

Q: *When does it flood?* A: The Army Corp of Engineers Report says any season of the year. However, it floods primarily during winter or spring snowmelt periods or rain-on-snow events, or any time during the summer monsoon season (usually from July to September).

Q: *Where does the runoff come from?* A: From the south and west slopes of the San Francisco Peaks. The watershed, or contributing drainage area at the city limits above Cheshire, is about fifty square miles and is 116 square miles near the downstream end of the Rio as it leaves the eastern end of the city. It is a tributary of San Francisco Wash, which feeds into the Little Colorado River.

FRIENDS OF THE RIO DE FLAG STEWARDSHIP PROGRAM

Our vision for this program is to have Rio Stewards watching over the entire length of the Rio de Flag and its major tributaries. Friends of the Rio would work with volunteer Rio stewards in developing a plan to restore and/or maintain an adopted area, help coordinate and communicate with property owners in the adopted area, and provide education about stream habitats and invasive species. The Friends would also provide support and publicity for clean up activities initiated by a Rio Stewardship group.

If you or your organization would like to become a steward for an area of the Rio de Flag or are interested in helping get this program off the ground, please contact Kathleen Satterfield:
k.satterfield@yahoo.com.

A signup form is on our website www.friendsoftheriodeflag.org

FIRST ANNUAL FALL CLEANUP OF THE RIO DE FLAG

When: 9:00 am to noon on Saturday, October 24, 2009.

Where: meet near the footbridge in Wheeler Park.

What to wear: long pants, sturdy shoes, hat, appropriate clothing per the weather forecast.

What to bring: water, sunscreen and sack lunch (the city will provide trash bags, gloves, and tools).

What to expect: an introduction and brief history of this section of the Rio; assignment to teams for sections from Francis Short Pond to Route 66; hike up the Rio on the FUTS Trail to Francis Short Pond (approximately 1/2 mile); cleanup on our way back downstream; lunch in the park with a discussion about "FoRio" — FRIENDS OF THE RIO DE FLAG.

KUDOS & GRATITUDE

Jack Welch has organized over twenty scenic walks along the Rio, spanning three months and attracting over 200 residents. Our thanks to Jack !

CALENDAR

FoRio Meetings are held from 6:00 pm to 8 pm at the
Thorpe Park Community & Senior Center
245 North Thorpe Road
(take Cherry Avenue west from downtown)

November 5th

December 3

January (no meeting)

February 4

FRIENDS OF THE RIO DE FLAG STEERING COMMITTEE

Kathleen Satterfield - Meeting Coordinator/Spokesperson

Jack Welch - Outreach

Collis Lovely - Daylight & Education Committee Chair

Jim Logan - Recording Secretary/Website

Alicyn Gitlin - at large

Susan Lamb Bean and Lee Lansing - Newsletter