

**TOWN COUNCIL OF DEWEY-HUMBOLDT
STUDY SESSION MEETING NOTICE**

Tuesday, September 8, 2015, 2:00 P.M.

**COUNCIL STUDY SESSION MEETING
2735 S. HWY 69**

**COUNCIL CHAMBERS, TOWN HALL
DEWEY-HUMBOLDT, ARIZONA**

AGENDA

The issues that come before the Town Council are often challenging and potentially divisive. In order to make sure we benefit from the diverse views to be presented, the Council believes that the meeting be a safe place for people to speak. With this in mind, the Council asks that everyone refrain from clapping, heckling and any other expressions of approval or disapproval. Council may vote to go into Executive Session for legal advice regarding any matter on the open agenda pursuant to A.R.S. 38-431.03 (A) (3), which will be held immediately after the vote and will not be open to the public. Upon completion of Executive Session, the Council may resume the meeting, open to the public, to address the remaining items on the agenda. Agenda items may be taken out of order. Please turn off all cell phones. The Council meeting may be broadcast via live streaming video on the internet in both audio and visual formats. One or more members of the Council may attend either in person or by telephone, video or internet conferencing. **NOTICE TO PARENTS:** Parents and legal guardians have the right to consent before the Town of Dewey-Humboldt makes a video or voice recording of a minor child. A.R.S. § 1-602.A.9. Dewey-Humboldt Council Meetings are recorded and may be viewed on the Dewey-Humboldt website. If you permit your child to participate in the Council Meeting, a recording will be made. You may exercise your right not to consent by not permitting your child to participate or by submitting your request to the Town Clerk that your child not be recorded.

1. Call To Order.

2. Roll Call. Town Council Members Arlene Alen, Mark McBrady, Dennis Repan, Doug Treadway, Nancy Wright; Vice Mayor Jack Hamilton; and Mayor Terry Nolan.

3. Study Session. No legal action to be taken.

3.1. Local Government Investment Pool (LGIP) presentation by Office of the State Treasurer. Requested by Council in May during the FY 16 Budget discussions.

3.2. Staff report of "Well water testing kits" program as a council directed expenditure item in Fiscal Year 2016 Budget and council direction of next steps.

3.3. Discussion of the 2016 Citizen Survey next steps. A follow-up on Council's service engagement letter for Yavapai College Economic Research Center to conduct the "survey".

3.4. Sound Financial Management Plan - Review/Edits. (Continued from the March 24 the Council meeting.)

4. Special Session. Legal action can be taken.

4.1. Whether to hold additional special session(s) this month. This is an established agenda item for Council's discussion on whether to add an additional special study session and if so, to set the date.

5. Comments from the Public. The Council wishes to hear from Citizens at each meeting. Those wishing to address the Council need not request permission or give notice in advance. For the official record, individuals are asked to state their name. Public comments may appear on any video or audio record of this meeting. Please direct your comments to the Council. Individuals may address the Council on any issue within its jurisdiction. At the conclusion of Comments from the Public, Council members may respond to criticism made by those who have addressed the public body, may ask Town staff to review a matter, or may ask that a matter be put on a future agenda; however, Council members are forbidden by law from discussing or taking legal action on matters raised during the Comments from the Public unless the matters are properly noticed for discussion and legal action. The total time for Public Comment is **3** minutes per person. The audience is asked to please be courteous

and silent while others are speaking.

6. Adjourn.

For Your Information:

Next Town Council Meeting: Tuesday, September 15, 2015, at 6:30 p.m.

Next Planning & Zoning Meeting: Thursday, October 8, 2015, at 6:00 p.m.

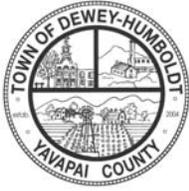
Next Town Council Work Session: Tuesday October 13, 2015, at 2:00 p.m.

If you would like to receive Town Council agendas via email, please sign up at AgendaList@dhaz.gov and type Subscribe in the subject line, or call 928-632-7362 and speak with Judy Morgan, Town Clerk.

Certification of Posting

The undersigned hereby certifies that a copy of the attached notice was duly posted at the following locations: Dewey-Humboldt Town Hall, 2735 South Highway 69, Humboldt, Arizona, Chevron Station, 2735 South Highway 69, Humboldt, Arizona, Blue Ridge Market, Highway 69 and Kachina Drive, Dewey, Arizona, on the ____ day of _____, 2015, at ____ p.m. in accordance with the statement filed by the Town of Dewey-Humboldt with the Town Clerk, Town of Dewey-Humboldt.
By: _____, Town Clerk's Office.

Persons with a disability may request reasonable accommodations by contacting the Town Hall at 632-7362 at least 24 hours in advance of the meeting.



TOWN OF DEWEY-HUMBOLDT
P.O. BOX 69
HUMBOLDT, AZ 86329
Phone 928-632-7362 ▪ Fax 928-632-7365

TOWN COUNCIL STUDY SESSION

September 8, 2015, 2:00 p.m. Town Council Meeting Chambers

Agenda Item: # 3.1. Local Government Investment Pool (LGIP) presentation by Office of the State Treasurer (requested by Council in May during the FY 16 Budget discussions).

To: Mayor and Town Council Members

From: Yvonne Kimball, Town Manager

Date submitted: September 3, 2015

Summary:

During the FY 16 Budget preparation, the Council asked to have a State representative to talk about LGIP. Staff has scheduled the presentation. At the State Treasurer Office's request, Town Accountant Deni Thompson and I sent some questions to the office in order to help with preparation for the presentation.

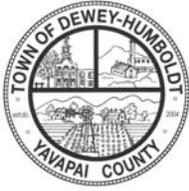
Here are the questions we came up with:

1. What is the "Local Government Investment Pool" (LGIP)? Its purpose? State Department/office that oversees the operation? State Statute governing it? How does the program work?
2. What should I, as an elected official know about investing in funds like LGIP? Why LGIP? How do I explain LGIP to my constituents who have no knowledge about investing in public funds?
3. What are the advantages of the LGIP compared to investing town funds in a bank program? I often was told by my constituents that the CD's with a bank generate higher yields and the town should buy CD's. Is this accurate? Is it practical for a small town of our size?
4. How was LGIP performance over the last decade, last five years and the last three years?
5. What are the legal parameters to consider when a municipality decides how and where to invest their money?
6. The town currently experiences interest earnings and market fluctuation activity at the end of each month. Earnings on all LGIP investments at year end for all funds was \$26,126.10. This was reduced by fluctuations for all funds of (\$3,557.64), a 13.617% annual decrease. Total gain/loss was \$22,568.46.
7. The town currently invests all funds in the LGIP, specifically pools 5 & 500. Staff was told previously that these are the only funds the Town qualifies to participate in. Is this accurate? Is this normal for a municipality with about \$1.5 million in revenues each year?

8. Town's June 30, 2015 statement reports "Account Investment Performance (%)" as:

HURF	1 Year	.12%
General Fund	1 Year	1.07%

With the town's limited investment options in the State Pool, what recommendations would the Department make for long term investment by the Town of Dewey-Humboldt?



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P.O. BOX 69
HUMBOLDT, AZ 86329
Phone 928-632-7362 ▪ Fax 928-632-7365

TOWN COUNCIL STUDY SESSION

September 8, 2015, 2:00 p.m. Town Council Meeting Chambers

Agenda Item: # 3.2. Staff report of “Well water testing kits” program as a council directed expenditure item in Fiscal Year 2016 Budget and council direction of next steps.

To: Mayor and Town Council Members

From: Yvonne Kimball, Town Manager

Date submitted: August 19, 2015

Some Options:

- a. Use the budgeted fund (\$10,000) to purchase testing kits from University of Arizona (U of A) Yavapai Extension and provide to residents free of charge; details need to be ironed out at a future meeting (possibly launching program in December 2015 after staff gains more knowledge on well water);**
- b. Use the fund to pay for residents to send their samples to certified lab for testing (possibly launching program in December 2015 after staff gains more knowledge on well water);**
- c. Do neither for now due to limited information and in-house resources; instead kicking off an education campaign on private water testing with/without U of A assistance; the budgeted fund can be rolled over to reserve or be allocated for other uses at Council’s direction**

Summary: Responding to citizens’ environmental concerns over water quality, Town Council has allocated \$10,000 in FY 2015-16 Budget to implement a “free well-water testing kits” program intending to do something helpful for D-H residents. Council’s original thought was to provide the kits to well owners in D-H free of charge, for the owners to test their water for possible indications of contamination. Private well owners are encouraged to test and maintain their water regularly. Although Town does not provide environmental or water services, it is staff’s understanding that this program, if implemented, was to provide private well owners a tool to manage their wells.

Guided by Council’s wish, I looked into the option of well water testing kits. University of Arizona Cooperative Extension Services at Yavapai County offers the kits for \$32. When I spoke to U of A researchers, they applauded Council’s desire to help our citizens. However, they do not believe the kits would be a good match for our community. Instead they recommend sending water samples to certified laboratories. I have enclosed the emails. The U of A research team also provide us with some educational materials about arsenic in water. I am enclosing them as well.

My brief research revealed that in addition to well water testing kits, there is at least one other option to accomplish the goal of promoting well testing – sending water samples to a certified lab, which was recommended by the researchers. If Council wants to pursue this route, staff can see about the details such as cost and establish an official relationship.

Lastly, I also wanted to remind the Council that we do not provide water or environmental protection services. In-house staff does not have expertise of water testing or treating contamination. When you consider expanding our services to the citizens to these areas, please be mindful of our limitation and our ability to realistically execute your vision.

Attachments: 1. emails from University of Arizona research staff regarding well water testing; 2. flyer of an upcoming well owner workshop hosted by U of A Yavapai Extension; 3. other educational literature regarding arsenic in well water.

From: Schalaus, Jeff W - (jschalau) <jschalau@ag.arizona.edu>
Sent: Tuesday, August 18, 2015 8:29 AM
To: Sarah Wilkinson; Yvonne Kimball
Cc: Ben Gerhardstein (Gerhardstein.Ben@epa.gov); Jennifer Botsford (jennifer.botsford@azdhs.gov); Artiola, Janick F - (jartiola)
Subject: RE: arsenic water testing kits

Sarah,

I'm in complete agreement. Below is the message I sent to Yvonne earlier this week:

Dear Yvonne,

I agree with Sarah Wilkinson's assessment for Dewey-Humboldt residents. We do sell arsenic test kits, but these are recommended for areas where arsenic (As) is not known to regularly be above the drinking water standard of 10 ppb. Our test kits are not very precise but inexpensive. Where elevated As levels are known to exist, we recommend sending a sample to a certified lab. Dewey-Humboldt residents should use to a certified lab since we have seen elevated levels of As there before. Other areas we've seen elevated levels of As are Camp Verde and Paulden. Those looking for a lab to test well water for arsenic should use a Arizona Department of Health Services certified lab. This eliminates arguments that may emerge about precision and accuracy. I also recommend Certified Labs for anyone buying or selling a house. I have linked a list of labs that we maintain for general users as well as the Arizona Department of Health Services website listings. This industry has a lot of turnover and it is good to have two information sources. I hope this helps explain the difference between our simple test kits and utilizing a certified lab. If you have additional questions, please let me know.

Laboratories Conducting Soil, Plant, Feed, or Water Testing

<https://extension.arizona.edu/sites/extension.arizona.edu/files/pubs/az1111-2015.pdf>

ADHS List of Arizona Certified Commercial Drinking Water Laboratories

<https://app.azdhs.gov/bfs/labs/elbis/drinkingwatertestinglabs/drinkingwatersearchcontentpage.aspx>

I have also attached a draft flyer for our well owner workshops. It describes the information that will be covered and resources that will be available.

Regards,

Jeff Schalaus

From: Sarah Wilkinson [mailto:wilkinso@pharmacy.arizona.edu]

Sent: Monday, August 17, 2015 03:39 PM

To: Yvonne Kimball

Cc: Ben Gerhardstein (Gerhardstein.Ben@epa.gov); Jennifer Botsford (jennifer.botsford@azdhs.gov); Schalaus, Jeff W - (jschalau); Artiola, Janick F - (jartiola)

Subject: arsenic water testing kits

Dear Yvonne,

I am following up after your phone call on Friday, and am CC'ing some of my contacts at Agency for Toxic Substances and Disease Registry, AZ Dept Health Services, and U Arizona Extension.

Dear Ben, Jenni, Jeff, and Janick,

Yvonne (Town Manager of Dewey-Humboldt) called me last week wanting information about the home arsenic testing kits offered through the UA's Cooperative Extension office in Yavapai, which used to be sold through Edessa. The town is considering providing arsenic testing to residents, and are researching the best options for doing so. I explained that as I understood our group discussions when we were preparing guidelines for arsenic testing/treatment which could be potentially placed on the Dewey-Humboldt website (draft attached to refresh everyone's memory), we decided not to suggest at-home test kits, but recommended residents send samples to a state-certified lab. (ADHS also made a nice list of labs, found here: <http://www.azdhs.gov/phs/oeh/toxicology/documents/lab-certified-drinking-water.pdf>) The reasoning as I understood it was that the colorimetric at-home test was not specific enough near the MCL of 10ppb, and we want folks to know their numbers so they can decide whether to treat, and/or check if their treatment is working, etc. I think there may have been a difference of opinion between some of our folks and Edessa, the Water Outreach coordinator at the Yavapai office, who has since retired, about the efficacy of the at-home kits in these instances.

I believe Yvonne has also talked to Jeff Schalau (director of the Yavapai Extension office) and he concurred, but if Jeff or any of you would like to weigh in here – especially if I have misrepresented anything – please do! We want to make sure that if the Town of Dewey-Humboldt does offer testing to residents (which would be a wonderful service!), they are doing it in the most accurate and cost-effective way.

Thanks,
Sarah

Sarah T. Wilkinson, PhD
Research Translation Coordinator
NIEHS Superfund Research Program
University of Arizona
Saguaro Hall, Room 325
Tucson, AZ 85721
(520) 307-3452
wilkinso@pharmacy.arizona.edu

Arizona Domestic Well Owner's Workshop

A three-hour workshop will be held at your local County Extension office, date and time: TBA

In Arizona the number of new domestic wells can exceed 3,000 each year, with an estimated 130,000+ wells across the State. These private wells provide water supply to an estimated 120,000 households, or about 5-7% of the state's population.

Your County has many domestic wells that provide water to homes. It is important that well owners are knowledgeable on how to care and maintain their well and have a basic understanding of issues that come with owning a well. The information will help the owner to provide safe drinking water and protect their investment.



Speakers:

- **Janick Artiola, Ph.D.:** University of Arizona Extension Water Quality Specialist. jartiola@cals.arizona.edu
- **Gary Hix, RG:** Past President of the Arizona Water Well Association.



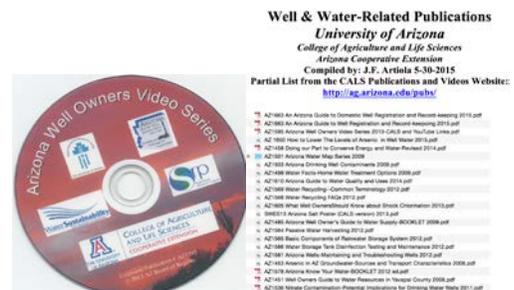
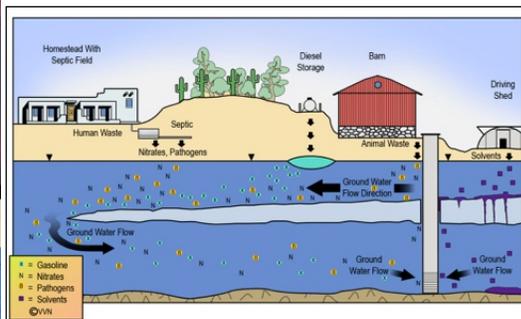
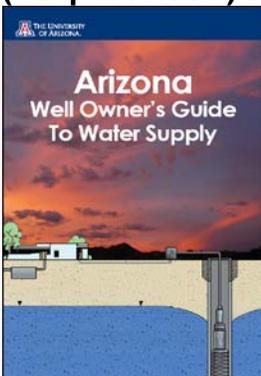
The workshop will cover water sources, regulations, domestic well maintenance and water treatments topics, including:

- *Introduction to Arizona Geology and aquifers*
- *Basic domestic well facts*
- *Regulations, Well registration, County Issues*
- *Routine well operation and maintenance*
- *Naturally occurring contaminants*
- *Aquifer vulnerability*
- *Well head and source water protection*
- *When to sample and what to sample for*
- *Home water Treatment options for your well water*

The information presented at the workshop comes in from a booklet titled: **“Arizona Well Owner’s Guide to Water supply.** University of Arizona Cooperative Extension publication #AZ1485.” Hard copies will be given to all attendees.

The electronic version (pdf file) of this publication can be obtained from the Arizona Cooperative Extension publications Office: <http://extension.arizona.edu/state/publications>

Copies of The Well Owners Video Series #AZ1595 DVD and Water-Related Publications (CD-pdf format) will also be distributed to workshop attendees.



Arsenic in Well Water: Information for Well Owners

In response to community requests for more information about arsenic in well water, The University of Arizona and their agency partners have put together the following information. This information can be used to inform your personal decisions about well water testing and treatment at your home.

Please note, the Town of Dewey-Humboldt is not a public water provider. In other words, the Town does not provide municipal water to the community. Many residents in the Dewey-Humboldt area own their own private wells or are customers of two local private water companies.

Household private wells: what you need to know

If you own a private well, you are responsible for maintaining the well and ensuring that your water is safe to drink. You can follow guidance from the [National Ground Water Association](#) and the [Centers for Disease Control and Prevention](#) to ensure the safety of your well water.

Because arsenic is a common groundwater contaminant in the Dewey-Humboldt area, The [University of Arizona Superfund Research Program](#) gathered the following information about arsenic in private wells for Dewey-Humboldt residents. However, well owners should be aware that arsenic is just one of several [potential contaminants](#) that could be present in your well water.

Why should I be concerned about arsenic in my well water?

In parts of Arizona, including the Dewey-Humboldt area, arsenic can naturally occur at high levels in groundwater, often because rock touching the groundwater has arsenic in it. This can be a concern because groundwater is a primary source of drinking water in Arizona. Some private wells in the state have arsenic levels above the drinking water standard, while others have levels below it. It is important for well owners to pay special attention to arsenic levels in their wells.

Arsenic is colorless, odorless, and tasteless, so you cannot know it is there unless you test your well water. Drinking or cooking with water containing arsenic can harm your health; whether your health is affected depends on how much arsenic you are exposed to and for how long, as well as your sensitivity to arsenic. [Consuming small doses of arsenic](#) over many years can raise your risk for some cancers and other health effects. If you own a well, read below for steps you can take to protect yourself from being exposed to too much arsenic.

It is the responsibility of private well owners to test for arsenic and reduce it if needed.

The U.S. Environmental Protection Agency (EPA) sets drinking water standards to protect consumers served by public water systems from health risks related to arsenic and other water contaminants. The EPA drinking water standard for arsenic is 10 ppb (parts per billion). Public water providers are required to reduce arsenic levels in drinking water to less than 10 ppb. However, private wells are not regulated and tested under federal drinking water regulations. If you have your own well, you are responsible for testing and maintaining its water quality.

How often should I test for arsenic in my drinking water?

1. Use a state-certified laboratory to test your untreated well water (i.e., taken directly from the well, without filtration or any other treatment) every year for bacteria and nitrates and at least every three years for arsenic, lead, and radon.
2. Once you know your arsenic level, respond as follows:
 - 2.1. If arsenic in your well water is **less than 10 ppb**, it is OK for drinking and cooking. Continue to test your untreated well water for arsenic at least every three years, using a state-certified laboratory.
 - 2.2. If arsenic in your well water is **between 10 – 200 ppb**, it is not an emergency, but make plans to get water for drinking and cooking from a different source, or install a home treatment system. Well water with arsenic levels **below 100 ppb** is considered safe to irrigate plants, including garden vegetables. Well water with arsenic levels **below 200 ppb** may be used as drinking water for livestock and poultry. Continue to test your untreated well water for arsenic at least every three years, using a state-certified laboratory.
 - 2.3. If arsenic in your water is **over 200 ppb**, DO NOT use this water for drinking or cooking. Use another source immediately and consider installing and maintaining a home treatment system. If the arsenic is **less than 500 ppb**, you can continue to use this water for bathing and washing. Other sources of water include bottled water or connecting to a public water supply. If you choose bottled water, contact the supplier for information about impurities, including arsenic, and be sure to clean and disinfect your water containers regularly. Continue to test your untreated well water for arsenic at least every three years, using a state-certified laboratory.
3. If you are treating your water for arsenic:
 - 3.1. Once you have established that treatment is effective (the arsenic level in your water is less than 10 ppb), continue to monitor the performance of your treatment system by testing your treated well water for arsenic every year, using a state-certified laboratory.
 - 3.2. If you install **any** water treatment system, whether it reduces arsenic or not, continue to test your treated well water for arsenic every year, using a state-certified laboratory.
 - 3.3. Maintain your treatment system according to manufacturer recommendations.

How can I reduce my exposure to arsenic?

Click here to download a fact sheet containing basic information on arsenic in drinking water and treatment options from the University of Arizona: [*Arsenic in drinking water: what you need to know.*](#)

Click here to download a University of Arizona Cooperative Extension Bulletin containing more detailed information on arsenic treatment options: [*How to Lower the Levels of Arsenic in Well Water: What Choices do Arizona Consumers Have?*](#)

Click here to download a fact sheet from the Arizona Department of Health Services (ADHS): [*How to Reduce Your Exposure to Arsenic and Lead in Dewey-Humboldt, Arizona.*](#)

Who can I contact for more information?

For questions about how often to test your private groundwater well, call ADHS at (602) 364-3128

For questions about which contaminants to test your well for, call ADHS at (602) 364-3128

To find a state-certified water testing laboratory, call the ADHS lab at (602) 364-0720

For questions about understanding water test results, call ADHS at (602) 364-3128

For questions about how to pick a water treatment system, call Dr. Janick Artiola at the University of Arizona at (520) 621-3516

For information about Humboldt Water System drinking water quality, contact Southwestern Utility Management at 520-623-5172 or <http://www.southwesternutility.com/contact.php>.

For questions about safe drinking water, call the Arizona Department of Environmental Quality (ADEQ), Water Quality Division at (602) 771-4641.

Arizona Laboratories Certified for Drinking Water Samples

Coconino County

Nortest Analytical
2400 E Huntington Drive
Flagstaff, AZ
www.nortestanalytical.com
(928) 774-2312

Maricopa County

Apex Environmental Laboratory
2105 S. 48th Street, Suite 102
Tempe, AZ
www.azapexlab.com
(602) 437-0762

Aquatic Consulting & Testing
1525 W. University Dr. Ste 106
Tempe, AZ
www.aquaticconsulting.com
(480) 921-8044

Chandler Analytical Laboratories
571 N. 54th Street
Chandler, AZ
www.chandleranalytical.com
(480) 963-2495

Transwest Analytical Services
3725 E. Atlanta Avenue
Phoenix, AZ
www.transwestanalytical.com
(602) 437-0330

Legend Technical Services
17631 N. 25th Avenue
Phoenix, AZ
www.legend-group.com
(602) 324-6100

Statewide Disinfection Services
344 S. Hawes Road
Mesa, AZ
www.statedisinfectionservice.com
(480) 981-8859

Orange Coast Analytical
4620 East Elwood Street, Suite 4
Phoenix, AZ
www.ocalab.com
(480) 736-0960

TestAmerica – Cotton Center
4645 E. Cotton Center Blvd, Bldg 1
Phoenix, AZ
www.testamericainc.com
(602) 437-3340

Mohave County

Mohave Environmental Laboratory
2850 Landon Dr., Ste A&B
Bullhead City, AZ
www.mohavelabs.com
(928)754-8101

Navajo County

Mohave Environmental Laboratory
200 N. 2nd Street
Holbrook, AZ
www.mohavelabs.com
(928)524-4635

Pima County

Legend Technical Services
4585 S. Palo Verde
Tucson, AZ
www.legend-group.com
(520) 327-1234

Turner Laboratories, Inc
2445 N. Coyote Drive, Suite #104
Tucson, AZ
www.turnerlabs.com
(520) 882-5880

Radon testing:

Radiation Safety Engineering, Inc.
3245 N. Washington Street
Chandler, Arizona 82445
www.radsafe.com
(480) 897-9459

How much arsenic is too much arsenic?

Arizona Department of Health Services has developed a simple method to determine if arsenic levels are too high, using the color code below

ppb is parts per billion and mg/L is milligrams per liter.



Recommended well water testing schedule:

All new wells	Once a year	Every three years
Arsenic and other primary metals, total coliform bacteria, nitrates, total dissolved solids, pH	Total coliform bacteria, nitrates, total dissolved solids, pH	Arsenic and other primary metals

A well water professional should be consulted if you have a contaminated well. Visit wellowner.org to find a well water contractor.

Office of Environmental Health
150 N 18th Avenue, Suite 140
Phoenix, Arizona 85007
(602) 364-3118

www.azhealth.gov





HOW TO LOWER THE LEVELS OF ARSENIC IN WELL WATER: WHAT CHOICES DO ARIZONA CONSUMERS HAVE?

Janick F. Artiola and Sarah T. Wilkinson

Arsenic levels are often above drinking water standards in Arizona groundwater, at levels that may affect health. Private well owners are responsible for testing and treating their own water. This publication gives an overview of arsenic in well water and discusses home water treatment options, including detailed descriptions of distillation, reverse osmosis (RO), and iron filters to lower arsenic and other common water constituents in drinking water.

Why should I be concerned about arsenic in my drinking water?

What is arsenic?

Arsenic is a naturally occurring element found in combination with other elements in the Earth's crust. Due to natural processes such as rock and mineral weathering and human activities such as mining, arsenic may be found in the soil, water, and air in some places at levels that are unsafe. Visit <http://www.atsdr.cdc.gov/toxfaqs/tfacts2.pdf> for more information on arsenic health effects.

How can I be exposed to arsenic?

Worldwide, the primary route of arsenic exposure is via drinking water (Naujokas et al. 2013). Exposure to arsenic may also occur through eating food or breathing airborne particles (dust) that contain arsenic. In addition, children may be exposed when they mouth their hands or objects like toys, which may be covered with soil and dust containing arsenic.

In several regions of the United States, including Arizona, arsenic can occur at high levels in soils and groundwater, due to complex natural geologic features and processes. High levels of arsenic in groundwater are problematic because groundwater is a primary source of drinking water in Arizona. For more information on Arizona aquifers see Extension Publications AZ1485 (Artiola & Uhlman 2009) and AZ1453 (Uhlman 2008)

How can arsenic in drinking water affect my health?

Consuming very large amounts of arsenic over the short term can cause poisoning. Consuming small amounts over many years can raise your risk for some cancers and have other health effects. Whether your health is affected depends on how much arsenic you are exposed to and for how long, as well as your sensitivity to arsenic.

What level of arsenic in my drinking water is considered safe?

The Safe Drinking Water Act requires the United States Environmental Protection Agency (US EPA) to set standards for drinking water quality, known as Maximum Contaminant Levels. The US EPA has set the arsenic standard at 10 ppb (parts per billion, or micrograms per liter) to protect consumers served by public water systems from the effects of long-term exposure to arsenic. Ten ppb is roughly equal to five teaspoons of ink in an Olympic-sized swimming pool.

However, even though public water utilities are required to lower arsenic levels in drinking water to less than 10 ppb, private wells are exempt from these rules. It is the responsibility of the well owner to test for arsenic and reduce it if needed. Read below for more information on how to do so.

Groundwater quality surveys conducted by the Arizona Department of Environmental Quality (ADEQ) have shown that about 1 in 5 water samples in Arizona had arsenic levels above the 10 ppb standard (Towne & Jones 2011; Figure 1). Thus, it is important for Arizona well owners to test their wells for arsenic.

How can I learn the level of arsenic in my drinking water?

Arsenic is colorless, odorless, and tasteless, so you cannot know it is there unless you test for it.

If you receive water from a municipal or privately owned water company, it is required to test your water for arsenic. You should receive an annual water quality report from your water supplier by July 1st of each year.

See also <http://water.epa.gov/drink/local/>

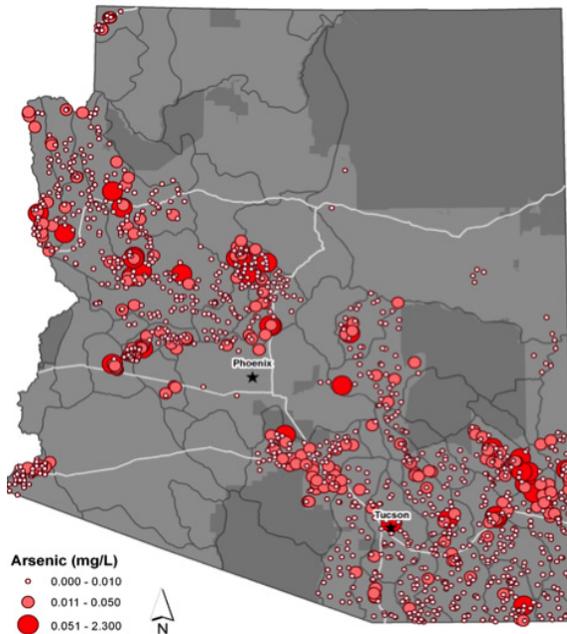


Figure 1. Arsenic levels in Arizona groundwater, 1995-2009 survey of 1,477 sites within 35 of the state's groundwater basins. Dot may include one or more wells. Arsenic concentrations reported in mg/L (1mg/L = 1,000 ppb); medium and large dots show samples over the 10 ppb arsenic standard (19% of samples). Source: Towne & Jones (2011).

If you drink bottled water, bottled water companies are not required to report results of any water quality testing. If you choose bottled water, contact the supplier for information about contaminants, including arsenic.

If you have your own well, you are responsible for testing and maintaining its water quality. Although Arizona private wells are not legally required to meet drinking water standards, it is recommended that well owners monitor their well water quality regularly and consider using one or more water treatment options to treat their well water as needed to meet or exceed the arsenic and other water quality parameters (Figure 2). Read below for more information focused on treatment systems for private well owners.

For additional information, see <http://www.azdhs.gov/phs/oeh/toxicology/wellwater.htm>.

How often should I test my drinking well water?

Because drinking arsenic in water has negative health effects, the Arizona Department of Health Services recommends that all well owners use a state-certified laboratory to test your well water on this schedule:

- Test every year for bacteria and nitrates
- Test at least every three years for arsenic, lead, and radon

See more information on how to find a state-certified lab and using at-home testing kits in the sections below



Figure 2. Overview of recommended steps for well owners. See text for additional details.

What do my arsenic testing results mean?

Once you know the arsenic level in your well water, respond as follows:

If arsenic in your well water is **less than 10 ppb**, it is OK for drinking, cooking, and all other household purposes. Continue to test your untreated well water for arsenic at least every three years, using a state-certified laboratory. Follow the testing schedule for other contaminants.

If arsenic in your well water is **between 10–200 ppb**, it is not an emergency, but make plans to get water for drinking and cooking from a different source, or install a home treatment system. Well water with arsenic levels **below 100 ppb** is considered safe to irrigate water plants, including garden vegetables, and may be used as drinking water for livestock and poultry (Ayers and Westcot 1985). If you have household pets, consult your veterinarian. Continue to test your untreated well water for arsenic at least every three years, using a state-certified laboratory.

If arsenic in your well water is **over 200 ppb**, DO NOT use this water for drinking, cooking, irrigation, or watering animals. Use another drinking and cooking source immediately and consider installing and maintaining a home treatment system. If the arsenic is **less than 500 ppb**, you can continue to use this water for bathing and washing. Other sources of water include bottled water or connecting to a public water supply. If you

choose bottled water, contact the supplier for information about contaminants, including arsenic, and be sure to clean and disinfect your water containers regularly. Continue to test your untreated well water for arsenic at least every three years, using a state-certified laboratory.

For additional help understanding arsenic test results, call the Arizona Department of Health Services at (602) 364-3128.

What treatment options are available to me?

See Table 1 for a summary of your water treatment and testing options. If you install any water treatment system, whether it reduces arsenic or not, continue to test your treated well water for arsenic every year using a state-certified laboratory.

Monitoring your treatment system's performance

If you are treating for arsenic, once you have established that treatment is effective (the arsenic level in your water is less than the 10 ppb standard), continue to monitor the performance of your treatment system by testing your treated well water for arsenic every year using a state-certified laboratory.

State-certified testing laboratories

It is important to get an accurate measurement of how much arsenic is in your well water. Modern laboratory methods are extremely accurate and consistent and can detect arsenic at levels much lower, very close to, or much higher than the 10 ppb standard.

To find a state-certified testing laboratory, contact the Arizona Dept. of Health Services at (602) 364-0720. The cost for a single arsenic test in a laboratory may be as much as \$50. However, commercial laboratories may offer group discount prices with other water contaminant tests with significant cost reductions. (See below for more information on other contaminants to test for.)

At-home arsenic testing kits

If you prefer to test at home, you may buy an at-home arsenic water testing kit. These kits vary in complexity and usually require mixing 2-4 chemicals with water to produce a chemical reaction¹. Results are seen as a color change on a paper strip. Although faster and often more cost-effective than laboratory testing, at-home arsenic testing kits estimate arsenic levels between a wide range of numbers and are therefore not as accurate. Look for a testing kit that has been verified by the US EPA Environmental Technology Verification (ETV) program (Figure 3). However, even studies of ETV-verified kits suggest that they do not always detect arsenic accurately at or near the level of the 10 ppb arsenic standard (Abby et al. 2002, Spear et al. 2006, and George et al. 2012). Consumers may use these arsenic-testing kits to routinely verify arsenic levels after confirming the kit is accurate: the testing kit results should be within 20% of state-certified laboratory results obtained with the same water sample or sample taken from the same water source.



Figure 3. Example of at-home Arsenic Testing Kit (no endorsement implied). Source: <http://www.sensafe.com/arsenic-kits/>

Considerations for choosing a home treatment system

Once you have your water testing results and decide you need to treat your water, you can select which treatment option is right for your needs and conditions. Choosing a home water treatment system can be a complicated process. A water quality professional can help you analyze your water treatment needs and identify an appropriate solution. This publication will review basic considerations. Additional details can be found in Extension Publication AZ1578 (Artiola et al. 2012). When choosing a treatment system, consider the following:

1. *What purposes do you use your well water for?* Possible well water uses include: drinking and cooking, landscape and vegetable garden watering, showers and toilets, and ranching. Think about which of these activities you will perform, and how much water they will require. See "What do my arsenic testing results mean?" for guidance on using water with arsenic in it for different purposes. Ultimately, it is up to the well owner to balance the health risks with cost and convenience when deciding whether and how much water should be treated.
2. *How much arsenic is in your well water?* Most systems remove a percentage of the arsenic, but not all of it. For example, even if a treatment removes 90% of the arsenic, if your starting level is 200 ppb, removing 90% still leaves arsenic in the drinking water at 20 ppb, above the standard.
3. *How much water do you need?* It may not be necessary to treat all the water from the well. Choose a unit that meets your needs assuming that each person in the household will need 2-3 gallons per day for cooking and drinking. Depending on how much water you need, you can choose a point-of-use (at a single tap) or point-of-entry (whole

¹ CAUTION: These tests produce small amounts of very toxic chemicals that should be handled in a well-ventilated space without spilling and disposed of according to hazardous waste regulations.

house) system. Point-of-use treatment can often treat enough water needed for drinking and cooking, while keeping installation and maintenance costs lower.

4. *What else is in your water?* The pH and the presence of other constituents and dissolved solids in your water may influence your treatment choice. See below for more details.

You can purchase water treatment systems from a variety of sources, including plumbers, hardware stores, water treatment companies, and through the Internet. Good planning and analysis is important so that you can buy the best system for your needs and conditions. Home water treatment systems often have one or more NSF² and/or ANSI³ certifications attesting to the technology and quality of its components. However, as with all other consumer products, it is buyer beware. To ensure that you are buying a certified system, before buying make sure your product is listed on one of these websites:

- NSF International: www.nsf.org/certified/DWTU
- The Water Quality Association: <http://www.wqa.org/Find-Products#/>

What are my home treatment options?

Be aware that many common home water treatment techniques do not remove arsenic from water. These include: particle filters, activated carbon filters (e.g. Brita, Pur), chlorine (bleach) disinfection, and heating or boiling the water. Water softening systems remove calcium and other minerals from hard water but do not remove arsenic from water.

There are four major ways to lower the levels of arsenic in water: 1) distillation, the collection and cooling of steam from heated water to remove arsenic; 2) filtration, the use of a semi-porous membrane that does not allow arsenic to pass through it; 3) adsorption, the use of a solid or porous material to trap arsenic; and 4) chemical reaction, which leads to arsenic coming out of the water as a solid.

There are a number of technologies that use these four major methods to remove arsenic from water. Some technologies, such as chemical reaction, are more appropriate for the large volumes processed by municipal water treatment, while others have been adapted for home water treatment (US EPA 2003). The three technologies most commonly used to treat well water at home are: distillation, membrane filtration such as reverse osmosis, and adsorption with iron or activated alumina⁴. Distillation and reverse osmosis make use of well-known technologies and are more widely available, while iron adsorption is less well known and has less consumer options to date. Each method is discussed in detail below. Each technology has advantages and disadvantages depending on the starting level of arsenic in the water, what other constituents or conditions are present, how

much water needs to be treated, and costs. After installation of any system, test your treated water to make sure treatment is effective. Maintain your system according to manufacturer's instructions.

Distillation

How does distillation work?

Distillation uses a physical process to separate contaminants from water (Figure 4). Contaminated water is boiled and the steam is collected in a separate container. The purified steam is then cooled, which causes it to condense back into water. Most constituents, including salts and metals such as arsenic, do not evaporate and are left behind. The boiling process also kills bacteria and other microorganisms. See also Extension Publication AZ1578 (Artiola et al. 2012) for a description of this and other water treatment methods.

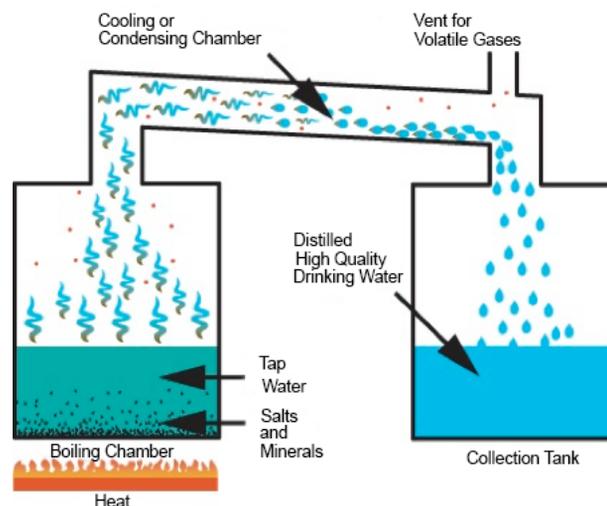


Figure 4. Diagram of the water distillation process.

Pros and cons of distillation?

A properly used distillation unit can produce water free of salts, metals, and other constituents, including removal of arsenic to a level much below the drinking water standard of 10 ppb. However, volatile organic compounds, such as solvents (e.g., gasoline, degreasers, dry cleaning liquids) that boil at temperatures less than the boiling point of water will vaporize along with the water. If you suspect your water has these contaminants, you must take additional steps to purify the water. Note that some distillation units have activated carbon filters to reduce volatile organic compounds.

How much water can be treated?

Home distillation systems can be used to produce small quantities (about 1-4 gallons/day) of water that is essentially free of salts and metals (including arsenic).

² The NSF International is an "independent, third-party testing and certification" organization that tests and certifies water treatment systems and other consumer products.

³ The American National Standards Institute (ANSI) is a private, non-profit organization that develops standards and certifies water treatment units and many other consumer and industry products.

⁴ Activated alumina filters are usually not effective to remove arsenic from water with pH above 7, common in Arizona groundwater, and are not considered here.

How to buy/install/maintain and how much does it cost?

Distillation systems are used as point-of-use, self-contained devices. Start-up costs start at around \$200 for tabletop models. Before purchasing a distillation unit, consumers should note its energy use and gallons of distilled water produced per hour or day. For example, a distillation unit that consumes 800 watt-hour and runs for 8 hours will cost about \$1 of electricity each day and may produce 2-3 gallons of distilled water. Distillation units generate heat and some gases and should be installed and operated in a well-ventilated area. Follow manufacturer recommendations to clean and maintain the unit. Because distilled water is corrosive do not store it in metal containers or in any container for long periods of time.

Distillation summary

This option may be useful when the daily volume of drinking water needed in the home is limited to less than 5 gallons/day. Distillation produces demineralized, arsenic-free water, but up-front equipment costs and electricity use can be significant depending of the unit size and volume of water needed.

Reverse osmosis (RO)

How does RO work?

Reverse osmosis (RO) is a type of filtration that uses pressure to force water through a semi-permeable membrane, leaving metals (such as arsenic), salts, and other contaminants behind.

Pros and cons of using RO?

Reverse osmosis systems are readily available for purchase by the general public, and are the most common method used by Arizona well owners to lower contaminants (particularly arsenic) in their well water. RO can be very effective at reducing the levels of many contaminants, such as salts, metals (including arsenic), nitrates, fluoride, uranium, and organic compounds.

RO systems do not require the addition of chemicals, but do require periodic maintenance as membranes and other components wear out. In addition, RO home systems operate at low pressures (40-60psi), which makes them inefficient; that is,

Water Quality	TDS	Alkalinity			
Before RO (ml/L)	400	145			
After RO (mg/L)	35.8	2.5			
Removal (%)	91	98			
Water Quality	Sodium	Potassium	Chloride	Nitrate	
Before RO (mg/L)	38.8	2.2	12.4	3.69	
After RO (mg/L)	7.6	0.66	3.29	2.14	
Removal (%)	80	70	73	42	
Water Quality	Calcium	Magnesium	Sulfate		
Before RO (mg/L)	69.1	12.5	143		
After RO (mg/L)	2.3	0.5	4.38		
Removal (%)	97	96	97		

Figure 5. Reverse osmosis removal rates of total dissolved solids (TDS) and common constituents found in a southern Arizona water sample: Source: J. Artiola.

they waste several gallons of water per gallon of water produced, resulting in an increase of total water use for drinking and cooking of about 3-8 times above previous use. Salts can collect and plug the membrane and these must be flushed out regularly. This problem is aggravated by water hardness (high levels of calcium and magnesium) that is usually high in Arizona groundwater. Thus, RO water treatment is more efficient in combination with pre-treated soft water.

Note that RO units do not remove the same amounts of each constituents from water; removal rates range from about 50% to about 95%+ and depend primarily on the type of constituents. For example, most RO systems are more effective at removing calcium, magnesium, and sulfate than sodium, potassium, chloride, or nitrate, (Figure 5).

RO systems can be very effective at removing arsenic (up to 95%), but efficiencies can vary dramatically, depending on the brand of system, how well it is maintained, and the starting level of arsenic. A recent study (Lothrop et al. 2015) of the water quality in five households using RO systems in a central Arizona community illustrates this variation (Figure 6). Three out of the five homes had starting levels of arsenic above the 10 ppb standard. In one home (A), RO reduced arsenic levels by 85%, but this still left arsenic above the 10 ppb standard. Two homes (C and D), started with different levels of arsenic, and RO reduced the arsenic by different amounts, resulting in levels below the 10 ppb standard for each home. In two other homes (B and E), arsenic started below the 10 ppb standard and an RO system did not have a significant effect. These results are similar to a survey of 57 households in a Western US state (Walker et al., 2007). That study reported that RO systems removed an average of 80% of the arsenic in treated water, leaving arsenic above the 10 ppb standard in one-third of the homes. This survey also showed that the varying effectiveness of RO systems depended on other water conditions such as salinity and forms of arsenic. One form of arsenic called arsenite (arsenic III) is less likely to be filtered out than the more common arsenate (arsenic V) form. However, this

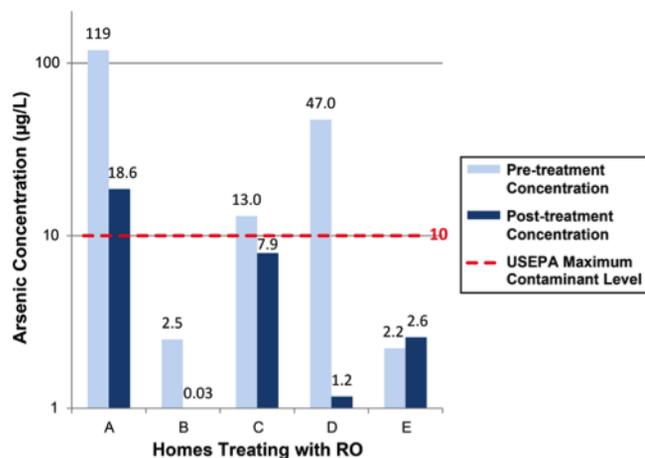


Figure 6. Arsenic concentrations in water samples before home treatment (Pre-treatment Concentration) and after RO treatment (Post-treatment Concentration) from central Arizona homes with paired samples (Lothrop et al 2015).

is normally not an issue of concern for Arizona well owners since most aquifers contain arsenate. Information about the brand of RO system and how the RO systems were maintained was not provided in either of these surveys.

Because RO effectiveness can vary, it is important for well owners to: test untreated water before RO installation; test treated water after RO installation; and re-test treated water annually to confirm the system is working.

How much water can be treated?

RO units vary in size, and may run as needed to keep the treated storage tank full. Select a unit that has a large enough storage tank to provide water during cooking times when larger volumes of water may be needed quickly. Note that using water with elevated levels of arsenic (up to 200 ppb) may be acceptable for landscape irrigation. Consult your veterinarian for advice on using this water for animals.

How to buy/install/maintain and how much does it cost?

RO is usually applied as a point-of-use system. There are a wide variety of choices for RO systems commercially, and many plumbers are familiar with them. Home RO systems start at about \$200. As with other consumer products, more durable RO units tend to cost more money. Annual maintenance costs are about \$50 and up depending on the membrane type and number of pre- and post RO treatment filters replaced. Note that RO units now include two or more pre- and post-treatment filters (micro filter and activated carbon) that must be replaced regularly⁵ with the RO membrane (Figure 7).

Well owners should consider hiring a professional to install the RO system and test it for effective arsenic removal. Since professional installation costs may exceed \$500, the buyer should request a performance guarantee of the unit. It is also recommended that the well owner have the water tested independently after installation to verify manufacturer claims and successful installation.

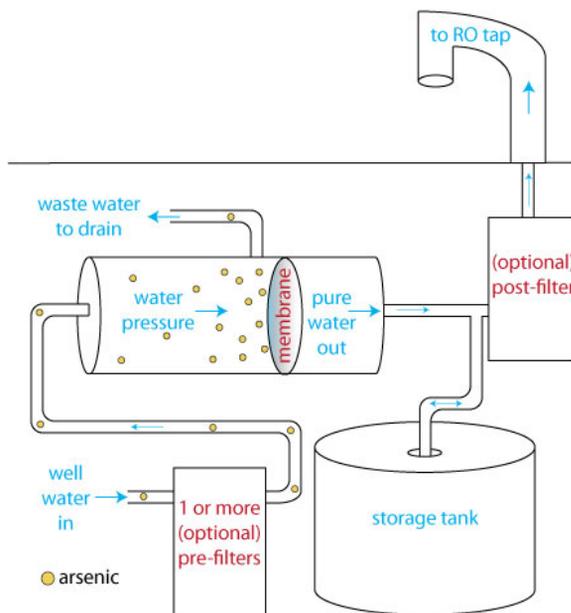


Figure 7. Diagram of a modern RO system with pre- and post-filters.

⁵ Usually done at manufacturer-recommended intervals.

Effects of arsenic starting level and RO effectiveness on final arsenic level - examples:

- If the water starts with 50 ppb arsenic and the unit has a 70% removal rate, treated water would still have 15 ppb of arsenic, above the standard of 10 ppb.
- If the water starts with 100 ppb arsenic and the unit has a 95% removal rate, treated water should have 5 ppb of arsenic, below the standard of 10 ppb.
- If the water starts with 250 ppb arsenic and the unit has a 95% removal rate, treated water should have 12.5 ppb of arsenic, above the standard of 10 ppb.
- Keep in mind that system maintenance also affects final arsenic level.

Homeowners familiar with plumbing may choose to purchase and install RO units by themselves. They should research units available on their local market first, as these are more likely to work for the local water conditions. Buyers should carefully review the claims of removal rates for arsenic and use it to calculate the final arsenic level in their RO-treated water. See text box for examples. After installation of an RO unit, it is strongly suggested that the RO effectiveness be tested initially and regularly to measure the level of arsenic in the treated water. The user should remain vigilant, check the unit for leaks, and clean and replace filter holders and filters at manufacturer-prescribed intervals.

RO summary

Reverse osmosis is a widely available water treatment technology suitable for home use, especially when total dissolved solids are below 1,000 mg/L and arsenic levels are below 100 ppb. Reverse osmosis systems are best installed and maintained by professionals or skilled do-it-yourselfers. These systems may increase household water consumption significantly. Reverse Osmosis wastewater may safely be used to irrigate landscape plants and trees. See Extension publication AZ1610 (Artiola et al. 2014).

Iron Filter Adsorption

How do iron filters work?

The chemistry of metal-based filters to lower arsenic levels is used in industrial water treatment and similar materials are also used in home treatment systems (AWWARF 2005). A typical iron filter is a cylinder tightly packed with grains or beads (Figure 8). It is designed so that water flows through, allowing arsenic to adsorb (stick) to the filler material. Most iron filters use some form of ferric (iron) hydroxides or oxides in granular forms (grains) or coated onto plastic beads or sand; the unique fillers are often patented (Hussan et al. 2008). An iron filter is placed in-line with the water line at the point of use and usually consists of a replaceable unit or a fixed filter holder with replaceable iron filter cartridges. Iron filters designed to adsorb arsenic may also lower selenium and fluoride levels in water.

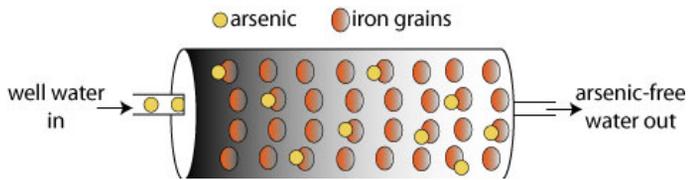


Figure 8. Schematic cross-section of an iron filter showing how arsenic molecules adsorb to iron grains.

Pros and cons of using iron filters?

Iron filters may offer a simpler alternative to the more complex RO systems to lower arsenic levels in well water. They are more energy-efficient, using no electricity or extra water. In addition, unlike distillation or reverse osmosis, iron filters can lower arsenic levels while still allowing important water nutrients such as calcium and magnesium to go through.

However, this method of arsenic removal is still not fully developed for home use. As a developing technology, it is up to the consumer to decide among the available filters and determine, often at his/her expense, how efficient and durable these iron filters are to treat well water.

Despite the mechanical simplicity of these filters, there are a number of water quality parameters and constituents that can affect the performance and durability of these filters. For example, pH levels above 7 may reduce arsenic removal rates, and soluble silica, phosphate, sulfate, or iron may interfere (compete) with arsenic attachment to iron filter materials. Other constituents like manganese, bicarbonate, chloride, fluoride, selenium, sulfide ions and organic matter may also react with filters. In addition to testing for arsenic, well owners should have their water quality tested, and have the results on hand before they invest in this technology. This additional water quality information is needed to ensure the efficiency and longevity of the iron filter. Read below for more details.

What should you know about your water quality before buying an iron filter to treat arsenic?

1. Highest Priority:

- a. Arsenic (As) should be less than 100 ppb.
- b. pH should be 6.5 - 8.5.
- c. Total dissolved solids (TDS) should be less than 500 mg/L.

If arsenic exceeds 100 ppb and/or TDS exceed 500 mg/L, consider using an RO system instead, either alone or in combination with an iron filter.

2. Additional considerations (listed from the most likely to least likely to affect filter performance):

- a. Silica (SiO_2) should be less than 30 mg/L. If reported as Silicon (Si), it should be less than >14 mg/L.
- b. Sulfate (SO_4^-) should be less than 100 mg/L or less than 33 mg/L if reported as $\text{SO}_4\text{-S}$
- c. Phosphate (PO_4^{-3}) should be less than 0.5 mg/L or less than 0.2 mg/L if reported as $\text{PO}_4\text{-P}$
- d. Fluoride (F^-) should be less than 1 mg/L. However, a survey of nearly 2000 wells showed that fluoride levels

above 1 mg/L are common in Arizona groundwater (Towne & Jones 2011).

- e. Bicarbonate (HCO_3^-) is the major constituent of water alkalinity at pH values between 7-8.2, common in AZ groundwater. Most Arizona aquifers have very hard water (high in calcium and magnesium) ranging from ~50mg/L to several hundred mg/L (Towne & Jones 2011) and this is usually associated with similar levels of alkalinity. Bicarbonates can reduce arsenic sorption to iron filters. However, the concurrent presence of calcium ions, common in AZ groundwater sources may lower the competition of bicarbonate ions (alkalinity) for arsenic adsorbing sites on iron filter media.
- f. Manganese (Mn) should be less than 0.05 mg/L.
- g. Iron (Fe) should be less than 0.3 mg/L.
- h. Sulfides (H_2S , HS) should be less than 0.1mg/L.

If any of these constituents is above the level shown above, consider using distillation or RO instead.

How to buy/install/maintain and how much does it cost?

The installation and operation of these in-line filters are usually simple. Costs range from \$100 to several hundred dollars depending on the filter size. Initial and regular testing is recommended to determine the filter's arsenic removal efficiency and capacity.

How much water can be treated?

An iron filter can be used to produce a few hundred gallons of arsenic-free water before replacement is needed. However, this will depend on the filter size, arsenic level, and other water quality parameters as discussed above. Once used, these filters cannot be reused. Take care not to throw used filters in the trash; instead, take them to your local hazardous waste recycling center for proper disposal.

Iron filter summary

This option may be appropriate for people who have arsenic less than 100 ppb, pH between 6.5 and 8.5, and total dissolved solids less than 500 mg/L and who are comfortable tinkering with their system and using a new technology.

Other water treatment options

Consumers can also get a professionally installed and maintained arsenic filter system that employs one or more US EPA-approved technologies, such as tanks filled with ion exchange resins or iron oxide coated resins, which usually require installation of an RO system as well. These resin-filled tanks are replaced or regenerated periodically by vendors that offer this service. Keep in mind that efficient arsenic removal using ion exchange is limited to low total dissolved solids/low sulfate water that often requires RO pretreatment (US EPA 2003).

Conclusions

Arizona and other parts of the United States have elevated levels of arsenic in groundwater due to the geochemical conditions found in many of its aquifers. It is important for well owners to test their well water for arsenic. The main options for Arizona

well owners to treat their well water to lower arsenic levels are distillation, reverse osmosis, and iron filters. Consumers should use water treatment systems that use technologies that are US EPA accepted and NSF/ANSI certified, and they should demand system performance guarantees from manufacturers or installers. When installed and maintained properly these consumer-oriented point-of-use technologies can produce sufficient quantities of water to meet the daily cooking and drinking needs of a household. The selection and efficient operation of a water treatment system needs to be based on detailed information about the groundwater quality. After installation of any system, test your water to make sure treatment is effective, and maintain your system according to manufacturer's instructions.

Additional Note: Consumers should be aware that the three treatment technologies discussed above will not only lower contaminants in water such as arsenic but also other beneficial constituents such as calcium, magnesium and fluoride from drinking water. Consult with your doctor or dietician if you plan the long-term use of low mineral or demineralized water (produced by RO and distillation) in your diet.

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Additional Resources and References

Water Quality Association. www.wqa.org

National Groundwater Association. www.wellowner.org

NSF International. www.nsf.org

Table 1. Arsenic in Well Water– Summary of Treatment Options

Contaminants	Treatment Considerations	Suggested Testing	Suggested Point -of Use (POU) Water Treatment Options		
			Distillation	RO	Iron Filter
If your arsenic is less than 10 ppb , no treatment is required unless other water quality parameters exceed drinking water standards.		If you live in an area of AZ known to have groundwater with elevated arsenic levels, you should test your water every 3 years.	NTR	NTR	NTR
If your arsenic is 10-100 ppb, use another source of water and/or install treatment system. Note: water may be safe for animals. Consult your veterinarian.	Three POU water treatment Options may be available: Reverse Osmosis (RO), Iron (Fe) filter, and steam Distillation. Iron filter arsenic removal efficiency depends on the levels of other water constituents such as silica, fluoride... See text.	Test the arsenic removal efficiency of your POU*** treatment system before you buy it and at least once a year thereafter.	Yes	Yes*	Yes**
If your arsenic is >200 ppb, stop drinking immediately and install treatment system. Note: water is not safe for animals.	Iron filtration may not lower arsenic below DWS in well water that contains arsenic levels above 200 ppb and/or elevated levels of other constituents such as silica, fluoride, sulfate...), see text for more details on the use of these filters.	Test the arsenic removal efficiency of your POU*** treatment system before you buy it and at least once a year thereafter.	Yes	Yes**	NR
If your water also has elevated levels of salts (total dissolved solids- TDS>500mg/L), nitrate (>10mg NO ₃ -N), fluoride (>4 mg/L)....	Consider an RO treatment system.	Test the arsenic removal efficiency of your POU*** treatment system before you buy it and at least once a year thereafter. See also UA Extension Publication AZ1485.	Yes	Yes*	NR
If your well/tap water fails the Fecal Coliforms test (E.coli)	See UA Extension Publications AZ1586, AZ1605	Test your well water once a year. See also UA Extension Publication AZ1485.	Yes	No	NR

* Pretreatment with a water softener may be needed if water is very hard.

**Iron Filters and RO systems may not lower arsenic levels below the 10 ppb drinking water standard.

*** POU filtration systems typically use cartridges that must be replaced regularly to ensure peak efficiency.

NR=Not Recommended

NTR= No Treatment Required



COLLEGE OF AGRICULTURE & LIFE SCIENCES

Cooperative
Extension

THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE AND LIFE SCIENCES
TUCSON, ARIZONA 85721

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This information has been reviewed by University faculty.
extension.arizona.edu/pubs/az1650-2015.pdf

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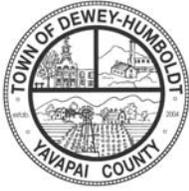


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Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Extension & Economic Development, College of Agriculture Life Sciences, The University of Arizona.

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TOWN OF DEWEY-HUMBOLDT
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Phone 928-632-7362 ▪ Fax 928-632-7365

TOWN COUNCIL STUDY SESSION

September 8, 2015, 2:00 p.m. Town Council Meeting Chambers

Agenda Item: # 3.3. Discussion of the 2016 Citizen Survey next steps. A follow-up on Council's service engagement letter for Yavapai College Economic Research Center to conduct the "survey".

To: Mayor and Town Council Members

From: Yvonne Kimball, Town Manager

Date submitted: August 20, 2015

Considerations:

- a. Review the action plan by Yavapai College;**
- b. Meeting scheduling for survey purposes**

Summary:

In July, Town Council formally decided to engage Yavapai College Regional Economic Development Center (YCREDC) for a FY 15-16 Citizen Survey. Alexandria Wright, Director of YCREDC, has been given and is reviewing the Town's previous Citizen Surveys which was conducted by the National Research Center.

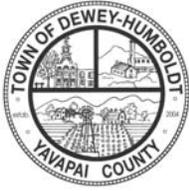
Ms. Wright and I have discussed the survey process and enclosed is the proposed action plan. The plan indicates that Ms. Wright would like to meet with the Council at least three times throughout the process. Given the importance and potential complication of the task, I recommend these three meetings be held as special meetings in addition to the three regularly scheduled meetings. These are dates for you to consider: Tuesday, **Sept. 22 or 29** for the first meeting for Ms. Wright to provide an overview report with the Council and gain a better understanding of the expectations of the survey; Tuesday, **October 27** for the second meeting where Ms. Wright can discuss with the Council a proposed survey questionnaire and receive your input; and Tuesday, **February 23, 2016** to go over final survey results and next steps.

These dates have been agreed upon by Ms. Wright. However, if Council wishes for a more compressed schedule, she can oblige.

Town of Dewey-Humboldt Citizen Survey & Analysis

Project Timeline:

<p>1st Meeting with Council</p> <p><i>To be held in September 2015</i></p>	<p>Purpose: Review the community overview report with the Council.</p> <ul style="list-style-type: none"> ✓ The report is inclusive of demographic, household, occupational, and industry data. This will help determine if questions can be removed because the information is already available. <p>Review edits from 2009 survey with Council and verify purpose of the survey.</p> <ul style="list-style-type: none"> ✓ Discuss need for survey and future application of survey results.
<p>September- October</p>	<p>Prepare new survey questionnaire based on 2009 survey and input gathered from council at the first meeting. The survey questionnaire will be distributed electronically to council for review.</p>
<p>2nd meeting with Council</p> <p><i>To be held in October</i></p>	<p>Discuss any further input on the survey and finalize the document for distribution.</p> <p>Consult with council as to how the survey will be conducted (mail, in-person at events and community areas, etc.) Gather ideas on community gatherings and outreach to garner the greatest number of respondents.</p>
<p>November- January</p>	<p>Conduct Survey</p>
<p>January- February, 2016</p>	<p>Aggregate data and prepare final report for council to review. The report will include a synopsis of direct responses, identification of policy priorities and an assessment of strengths, weaknesses, and opportunities as identified by the citizenry.</p>
<p>3rd Meeting with Council</p> <p><i>To be held in February 2016</i></p>	<p>Present report to council for questions or clarifications needed. Prepare Council for next steps.</p>



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TOWN COUNCIL STUDY SESSION

September 8, 2015, 2:00 p.m. Town Council Meeting Chambers

Agenda Item: # 3.4. Sound Financial Management Plan – Review/Edits. (Continued from the March 24 the Council meeting.)

To: Mayor and Town Council Members

From: Yvonne Kimball, Town Manager

Date submitted: September 3, 2015

Summary:

In March, I approached Council to inform you of my comments of the Principles of Sound Financial Management. My primary concern is: The document was designed for a larger and fast growing municipality where processes are designed to be more complicated. While all intentions are good, D-H does not have the manpower to fulfill all expectations. It is true that with future hiring of an Administrative Assistant, staffing level would be increased and workload should even out some. However, the Principles of Sound Financial Management touches upon almost all aspects of Financial Management. Since I was not the original author of the document, I am not certain that increased staffing level would resolve all my reservations about the document.

I made some edits to the document as requested by the Council in March. However, I would like to discuss the entire Finance Management Policy and the budget process with someone outside of our agency. Pat Walker is a very well-respected finance professional in the state. She has over 30 years of experience working with and for Arizona local governments including big and small agencies. I would like to gather her input on the “Principles of Sound Financial Management” and then bring back this subject for Council’s review.

P.S. - League asked Ms. Walker to provide a training called “Basics of Reading and developing a municipal budget” in June. I watched the presentation recently in preparation for my editing of the “Principles” document. I found it helpful even after years of building budgets for small towns. The presentation is available through the League’s YouTube channel if you are interested.



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Principles of Sound Financial Management

Table of Contents

Table of Contents 3

Introduction 5

Resolution adopting these Principals as a Council Policy 08-58 6

1. Fiscal Planning and Budgeting 7

 Forecasting 7

 Schedule 7

 Standards 7

 Operating Budget 8

 Performance Measures 8

 Budget Risk Management 9

 Capital Budget 9

2. Fund Balance 11

3. Expenditure Control 13

4. Revenues and Collections 15

5. Grants 17

6. User Fee Cost Recovery and Indirect Cost Allocations 19

7. Development Impact Fees ~~2221~~

8. Capital Improvement Program ~~2523~~

9. Cash Management and Investment ~~2725~~

10. Debt Management ~~2927~~

11. Risk Management ~~3334~~

12. Accounting, Auditing and Financial Reporting ~~3533~~

13. Policy Review ~~3735~~

Appendix A: Reporting of Significant Events (Continuing Disclosure Requirements) ~~3937~~

Introduction

The Town has an important responsibility to its citizens to carefully account for public funds, to manage its finances wisely, and to plan for the adequate funding of services desired by the public, including the provision and maintenance of public facilities. In these times of tight budgets, of major changes in federal and state policies toward local government, and of limited growth in the Town's tax base, the Town needs to ensure that it is capable of adequately funding and providing those government services desired by the community. Ultimately, the Town's reputation and success will depend on the public's awareness and acceptability of the management and delivery of these services.

These adopted Principles of Sound Financial Management establish guidelines for the Town's overall fiscal planning and management. These principles are intended to foster and support the continued financial strength and stability of the Town of Dewey-Humboldt as reflected in its financial goals. The Town's financial goals are broad, fairly timeless statements of the financial position the Town seeks to attain:

- To deliver quality services in an affordable, efficient and cost-effective basis providing full value for each tax dollar.
- To maintain an adequate financial base to sustain a sufficient level of municipal services, thereby preserving the quality of life in the Town of Dewey-Humboldt.
- To have the ability to withstand local and regional economic fluctuations, to adjust to changes in the service requirements of our community, and to respond to changes in Federal and State priorities and funding as they affect the Town's residents.
- [The Town does have bond obligations now. If and when the Town begins to issue bonds, town will do the following:](#) To maintain a high bond credit rating to ensure the Town's access to the bond markets and to provide assurance to the Town's taxpayers that the Town government is well managed and financially sound.

Following these principles will enhance the Town's financial health as well as its image and credibility with its citizens; the public in general, bond rating agencies and investors. To achieve these purposes as the Town of Dewey-Humboldt continues to grow and develop, it is important to regularly engage in the process of financial planning including reaffirming and updating these financial guidelines. Policy changes will be needed as the Town continues to grow and become more diverse and complex in the services it provides, as well as the organization under which it operates to provide these services to its citizens.

Resolution adopting these Principals as a Council Policy 08-58xxx

RESOLUTION No 08-58

A RESOLUTION OF THE MAYOR AND TOWN COUNCIL OF THE TOWN OF DEWEY-HUMBOLDT, ARIZONA, ADOPTING THE PRINCIPLES OF SOUND FINANCIAL MANAGEMENT AS COUNCIL POLICY 08-58, AUTHORIZING THE PREPARATION OF DOCUMENTS, AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Town has an important responsibility to its citizens to carefully account for public funds, to manage its finances wisely, and to plan for the adequate funding of services desired by the public, including the provision and maintenance of public facilities;

WHEREAS, in these times of tight budgets, of major changes in federal and state policies toward local government, and of limited growth in the Town's tax base, the Town needs to ensure that it is capable of adequately funding and providing those government services desired by the community; and

WHEREAS, ultimately, the Town's reputation and success will depend on the public's awareness and acceptability of the management and delivery of these services.

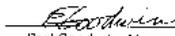
NOW THEREFORE, be it resolved by the Mayor and Town Council of the Town of Dewey-Humboldt, Arizona that:

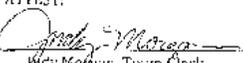
~~Section 1: Principles of Sound Financial Management Adoption. It shall be the public policy of the Town of Dewey Humboldt to adopt the Principles of Sound Financial Management (PoSFM), attached hereto as Exhibit A, as Council Policy No 08-58, to establish guidelines for the Town's overall fiscal planning and management in order to foster and support the continued financial strength and stability of the Town of Dewey-Humboldt as reflected in its financial goals.~~

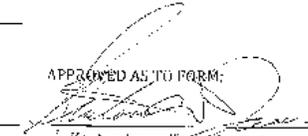
Section 2: Authorization to Prepare Documents. The Town Manager, Town Clerk, Town Attorney, and any other necessary persons are hereby authorized to prepare the agreements, forms and instruments contemplated to be used by the Town in implementing the provisions of the PoSFM.

Section 3: Effective Date. This Resolution shall be effective immediately.

PASSED AND ADOPTED by the Mayor and Town Council of the Town of Dewey Humboldt, Arizona, this 21st day of October 2008.


Earl Gondwin, Mayor

ATTEST:

Nancy Morgan, Town Clerk

APPROVED AS TO FORM:

Kenton Jones, Town Attorney

1. Fiscal Planning and Budgeting

Fiscal planning refers to the process of identifying resources and allocating those resources among numerous and complex competing purposes. The primary vehicle for this planning is the preparation, monitoring and analysis of the Town’s budget. It is increasingly important to incorporate a long-term perspective and to monitor the performance of the programs competing to receive funding.

Forecasting

The Chief Finance Departmental Officer will prepare a ~~32-year~~ long-range financial forecast that will incorporate both revenue and expenditure estimates for the Town’s major operating funds. The ~~23-year~~ revenue forecast will **focus solely on** revenues that are anticipated to be sustainable over the ~~32-year~~ period. The estimates of non-agency revenues, **grant** and agency revenues, and inter-fund transfers will also be provided. Expenditure projections should include the anticipated operating impacts of the adopted capital improvement program. The ~~23-year~~ long-range forecast will be updated **annually** and presented to the Town Council at the start of the Town budget process. In the event that the Town issues debt securities, the CFO Department will prepare **5-year** forecasts, rather than ~~3-year~~.

~~Additionally, the CFO will prepare less detailed 10-year forecasts for use in the Capital Improvement Program budget only.~~

Schedule

The Town Manager shall submit a proposed annual budget to the Town Council before the ~~April 30th~~ ~~March 31st~~ in each year. This proposed budget must be based on Council’s established goals. The Town Manager shall execute the budget as finally adopted, ~~pursuant to Title 42, Chapter 7, Article 3, Section 17105 of the Arizona Revised Statutes, as amended.~~ The Town will budget revenues and expenditures on the basis of a fiscal year which begins July 1st and ends on the following June 30th. The Town Council shall make any effort to adopt the budget for the following fiscal year no later than ~~July 1st~~ ~~June 1st~~. If the budget is not adopted before ~~June~~ ~~July~~ 1st, the Council ~~shall may~~ adopt a continuing resolution to allow the Town to expend funds until the budget is adopted.

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The Town Manager shall provide **annually** a budget preparation schedule outlining the preparation timelines for the proposed budget. ~~Budget packages for the preparation of the budget, including forms and instructions, shall be distributed to Town programs in a timely manner for the Programs’ completion. Program officials shall prepare and return their budget proposals to the Budget Office, as required in the budget preparation schedule.~~

Standards

~~The Town will prepare a budget in accordance with the framework established by the National Advisory Council on State and Local Budgeting in Recommended Budget Practices – A Framework for Improved State and Local Government Budgeting and the Government Finance Officers Association in its Distinguished Budget Award Program.~~ The proposed budget will contain the following:

Commented [YK1]: This language indicates that town council requires the budget to obtain the “distinguished budget award”. The town obtained the awards twice. I have not made this a priority although I would like to continue/re-gain the award when I have sufficient manpower. One added benefits for the award is the increased marketability of staff.

- ☑ Revenue estimates by major category, by fund;
- ☑ Expenditure estimates by program levels and major expenditure category, by fund;
- ☑ Estimated fund balance by fund;
- ☑ Debt service, by issue, detailing principal and interest amounts;
- ☑ Proposed personnel staffing levels per program;
- ☑ A detailed schedule of capital projects; and
- ☑ Any additional information, data, or analysis requested of management by the Town Council.

The Town maintains its financial records in accordance with accounting principles generally accepted in the United States of America known as GAAP. Although the Town's budget is prepared on a modified cash basis that differs from GAAP, the Town will attempt to minimize these differences between the budget basis of accounting and GAAP.

Operating Budget

The operating budget will be organized around policy outcomes, typically in programs, intended to be achieved within the budget period. It is often appropriate to refer to interim outcomes towards a longer-term outcome beyond the current year. The preferred policy outcomes will be explicitly outlined and will describe the changes in the lives of individuals, families, organizations, or the Town as a result of the program. Line items within programs should describe discrete actions, and should be neither so vague as to confuse the expected outcome nor so granular that the mass of detail is distracting.

Fiscally, the operating budget will be based on the principle that current operating expenditures, including debt service [when it occurs](#), will be funded with current revenues creating a balanced budget. The budget will not use one-time (non-recurring) sources to fund continuing (recurring) uses, postpone expenditures, or use external borrowing for operational requirements. The budget will incorporate the best available estimates of revenues and expenditures.

The budget will fully appropriate the estimated actual expenditures needed for authorized regular staffing. A system will be used to facilitate position control. At no time shall the number of full-time and regular part-time employees on the payroll exceed the total number of positions authorized by the Town Council. Pursuant to Personnel Administrative Regulations, additional temporary appointment of employees can be made with the approval of the Town Manager.

Unspent appropriations for significant programs and major projects will be considered for re-appropriation in the subsequent fiscal year. Such re-appropriation shall be included to finance the overall proposed budget. ***There may be transfers of appropriations between programs that occur only by Council action amending the adopted budget.***

Performance Measures

Performance measurement indicators will be integrated into the budget process as appropriate. Performance measures will be monitored and reported on an annual basis.

Alternatives for improving the efficiency and effectiveness of the Town's programs and the productivity of its employees will be considered during the budget process. Duplication of services and inefficiency in service delivery **should** be eliminated wherever they are identified.

Budget Risk Management

The Town's annual budget will include contingency appropriation to provide for unanticipated increases in service delivery costs, emergencies, and needs that may arise throughout the fiscal year. The contingency appropriation can only be expended upon separate Council action.

The Town shall establish appropriate management controls to monitor expenditure budgets to ensure they do not exceed authorizations. For operating budgets, this control shall be exercised at the program/fund level. For capital budgets, this control shall be at the project level.

A **quarterly** report on the status of the General Fund budget and trends will be prepared by the Finance Department and presented to the Town Council by **no later than 60 days of the end of each quarter**. In addition, the **quarterly** report shall include revenue and expenditure projections through the end of the fiscal year.

If a deficit is projected during any fiscal year, the Town will take steps to reduce expenditures, increase revenues or, if a deficit is caused by an emergency, consider using the Undesignated General Fund Balance, to the extent necessary to ensure a balanced budget at the close of the fiscal year. The Town Manager may institute a cessation during the fiscal year on new hires, promotions, transfers, and capital equipment purchases. Such action will not be taken arbitrarily and without knowledge and support of the Town Council.

Capital Budget

The Capital Budget will be prepared in accordance with the *Capital Improvement Program* section hereof.

2. Fund Balance

Fund balance is an important indicator of the Town's financial position. Adequate fund balances must be maintained to allow the Town to continue providing services to the community in case of economic downturns and/or unexpected emergencies or requirements.

Fund Balance is comprised of Nonspendable, Restricted, Committed, Assigned, or Unassigned components. This policy refers to unrestricted fund balances which would include the latter three fund balance components: Committed, Assigned, or Unassigned. See the chart at the end of this section for an explanation of Fund Balance Reporting.

The Town's Unrestricted Fund Balances will be maintained to provide the Town with a comfortable margin of safety to address emergencies and/or unexpected declines in revenue without borrowing.

Committed Fund Balance

Mayor and Council action is required to "Commit" and "Uncommit" funds for a specific purpose.

The Town will maintain a Contingency Reserve Fund as part of the committed component. This fund will maintain a balance of at least 10% and no more than 30% of the general fund budgeted expenditures for the current fiscal year. The exact percentage will be set by Council each year as part of the budget process.

The Town will maintain an Operational Reserve at least 30% and no more than 50% of the average General and HURF fund total revenues or expenditures for the preceding three years; whichever amount is higher. The intent of this is to provide additional stability to the General Fund recognizing the cyclical nature of the economy. The Operational Reserve may only be used to cover unforeseen emergencies and unexpected declines in revenue.

To the extent these reserves are expended, the Town will increase its General Fund revenues or decrease its expenditures as necessary to prevent the continued use of these reserves. The Town must restore to the minimum limit over a period not to exceed three years.

Assigned Fund Balance

Use of any Assigned Fund Balance up to \$4,999 requires approval of both the Town Manager and finance. Amounts \$5,000 and up requires finance, Town Manager and Council approval.

Unassigned

Funds in excess of the minimum targets will be retained in the Unassigned General Fund Balance, and may be considered to supplement "pay as you go" capital outlay and one-time operating expenditures, or may be used to prepay existing Town debt. These funds may not be used to establish or support costs that are recurring in nature.

Fund Balance Reporting		
CLASSIFICATION	DEFINITION	EXAMPLES
NONSPENDABLE	"Amounts that cannot be spent because they are either (a) not in spendable form or (b) legally or contractually required to be maintained intact."	Permanent principal of an endowment fund, Prepaid items, inventories
RESTRICTED	"Fund balance should be reported as restricted when constraints placed on the use of resources are either: a. Externally imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments; or b. Imposed by law through constitutional provisions or enabling legislation."	Restricted by state statute, Taxes dedicated to a specific purpose (HURF), Revenues restricted by enabling legislation, Grants earned but not spent, Unspent bond proceeds, Debt covenants
UNRESTRICTED	COMMITTED	"Used for specific purposes pursuant to constraints imposed by formal action of the government's highest level of decision-making authority" Formal Minimum Fund Balance Contingency Reserve Fund Economic Uncertainty Fund Town Council decides to set aside \$1M for a new town hall
	ASSIGNED	"Amounts that are constrained by the government's intent to be used for specific purposes, but are neither restricted nor committed" Other Specified Contingencies, Appropriated Fund Balance, Council delegates the authority to assign fund balance to the Town Manager (during budget process)
	UNASSIGNED	Unassigned fund balance is the residual classification for the General Fund. This is fund balance that has not been reported in any other classification. The General Fund is the only fund that can report a positive unassigned fund balance. Other governmental funds would report deficit fund balances as unassigned.

3. Expenditure Control

Management must ensure compliance with the legally adopted budget. In addition, purchases and expenditures must comply with legal requirements and policies and procedures set forth by the Town.

Expenditures will be controlled by an annual appropriated budget at the program/fund level. The Town Council shall establish appropriations through the budget process. The Town Manager may transfer expenditure authority between line items within a program, but only the Council may transfer appropriations between programs. Written procedures will be maintained for administrative approval and processing of budget transfers between line items, programs, and funds. All purchases, including contracts exceeding **\$5,000** must be executed by the Town Council; other purchases, including contracts and financial obligations may be executed by the Town Manager when appropriated in the annual budget.

Program heads are responsible for monitoring expenditures to prevent exceeding their total program expenditure budget. It is the responsibility of these program heads to immediately notify the Town's Chief Financial Officer and the Town Manager of any circumstances that could result in a program budget being exceeded.

The Town will maintain a purchasing system that provides needed commodities and services in a timely manner to avoid interruptions in the delivery of services. All purchases shall be made in accordance with the Town's procurement code, purchasing policies, guidelines and procedures and applicable state and federal laws. The Town will endeavor to obtain supplies, equipment and services that provide the best value.

A system of appropriate internal controls and procedures using best practices shall be maintained for the procurement and payment processes. These internal controls will be reviewed in conjunction with the Town's annual financial audit.

The Town will make all payments within the established terms. The Town shall pay applicable contractor invoices in accordance with the requirements of Arizona Revised Statutes § 34-221.

The State of Arizona sets a limit on the expenditures of local jurisdictions. The Town will comply with these expenditure limitations and will submit an audited expenditure limitation report, audited financial statements, and audited reconciliation report as defined by the Uniform Expenditure Reporting System (A.R.S. § 41-1279.07) to the State Auditor General within the prescribed timelines.

The Town Council will pursue local override of the State expenditure limitation as provided by the State Constitution if the projected expenditures within **2 years** are anticipated to exceed the expenditure limitation. This override may be through local voter approval of a permanent base adjustment (Article IX, Section 20, Subsection 6), or by local voter approval of Home Rule (Article IX, Section 20, Subsection 9).

4. Revenues and Collections

In order to provide funding for service delivery, the Town must have reliable revenue sources. These diverse revenues must be assessed and collected equitably, timely, and efficiently.

The Town's goal is a General Fund revenue base balanced between local sales (transaction privilege) taxes, state shared revenues (including state sales taxes), and other revenue sources.

The Town will maintain a diversified and stable revenue base to shelter it from economic changes or short-term fluctuations by doing the following:

- Conducting a cost of service study ~~every 3 years periodically~~ to determine if all allowable fees are being properly calculated and set at an appropriate level.
 - Establishing new charges and fees as appropriate and as permitted by law.
 - Pursuing legislative change, when necessary, to permit changes or establishment of user charges and fees.
- ~~Aggressively Actively~~ collecting all revenues, late penalties and related interest as authorized by the Arizona Revised Statutes. [Towards collecting civil penalties that have been imposed by the Town, the town has the following policies: A. Town utilizes a collection agency. The Town Manager shall have discretion to determine the length of time the collection agency will have to collect the amounts due to the Town. B. If a civil penalty was imposed in a case related to the occupancy or use of land. The Town can also record a notice of civil sanction and/or an abatement order and/or violation notice with the Yavapai County Recorder.](#)

5. Grants

Many grants require Council's appropriation of funds, either for the original grant or to continue programs after the grant funding has expired. Council should review these grant programs prior to determining whether application should be made for these grant funds.

The Town shall apply for only those grants that are consistent with the objectives and high priority needs previously identified by Council. The potential for incurring ongoing costs, to include the assumption of support for grant-funded positions from local revenues, will be considered prior to applying for a grant.

The Town shall attempt to recover all allowable costs – direct and indirect – associated with the administration and implementation of programs funded through grants. The Town may waive or reduce indirect costs if doing so will significantly increase the effectiveness of the grant.

All grant submittals shall be reviewed for their cash match requirements, their potential impact on the operating budget, and the extent to which they meet the Town's policy objectives. When the potential for ongoing expenditures exceeds the program budget allocation, programs shall seek Council approval prior to submission of the grant application. If time constraints under the grant program make this impossible, the program shall obtain approval to submit an application from the Town Manager and then, at the earliest feasible time, seek formal Council approval. If there is a cash match requirement, the source of funding shall be identified prior to application.

The Town may terminate grant-funded programs and associated positions when grant funds are no longer available unless alternate funding is identified. When such grant funding is terminated, Town staff will prepare a report evaluating the results of the grant program and will make a finding to determine whether to continue funding the project with other financial resources. Many grants are given to enable towns to try a program or to provide seed money to establish a program, and follow-up analysis is required to make the best use of such funds.

6. User Fee Cost Recovery and Indirect Cost Allocations

User fees and charges are payments for voluntarily purchased, publicly provided services that benefit specific individuals. The Town relies on user fees and charges to supplement other revenue sources in order to provide public services.

Indirect cost charges are assessed to recover a portion of the costs for services provided between various funds.

The Town may establish user fees and charges for certain services provided to users receiving a specific benefit.

~~The Town will conduct a cost of service study to identify the full cost of providing a service for which fees are charged. The calculation of full cost will include all reasonable and justifiable direct and indirect cost components. Fees and charges will be established to recover the full cost of service, unless the percentage of full cost recovery has been reduced by specific action of the Town Council. It is recognized that occasionally competing policy objectives may result in reduced user fees and charges that recover only a portion of service costs.~~

~~User fees shall be reviewed every **3 years** to calculate their full cost recovery levels, to compare them to the current fee structure, and to recommend adjustments where necessary.~~

~~The Town shall establish a cost allocation plan to determine **annually** the administrative service charges due to the appropriate operating fund for overhead and staff support provided to another fund. Funds shall pay these indirect cost charges for services provided by another fund.~~

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7. Development Impact Fees (policy reserved)

The Council's policy is that growth should pay for itself to the maximum extent possible. As such, the Council has adopted a system of development impact fees. Development impact fees are one-time charges assessed against new customers to recover a proportional share of capital costs incurred to provide service capacity for new customers. Appropriate development fees are an important component in the overall strategy for pricing services. In 2009 the Council adopted Ordinance 09-59 to impose impact fees in the Town.

However, in 2011 State Legislature adopted comprehensive legislation that substantially revised the procedures for adoption and imposition of development fees. Ordinance 05-59 remained in place until July 31, 2014. The 2011 "impact fee" state legislature (A.R.S. 9-463.05) has made significant changes that the cost associated with administering impact fees are higher while the regulation for impact fee uses are stricter. Based on the Town's population growth projection trend, it has become impractical and not cost-effective to continue the impact fee program. Therefore, Council has decided to remove impact fee charge as of August 1, 2014. Town council can at any time decide to reinstate the impact fees upon a study by a qualified firm.

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The Town's objectives for development impact fees shall include the following:

- Support the cost of growth.
- Minimize the impact of growth on existing residents.
- Develop cost justified development fees.
- Address infrastructure requirements.
- Promote economic development.
- Provide financial capacity.

In general, development impact fees must be based on a rational analysis. This analysis will include:

- an assessment of the impacts of growth on the Town's capital needs;
- a determination that the amount of the fee does not exceed the reasonable cost to provide capacity to accommodate growth;
- the funds collected must be adequately allocated to pay for growth-related impacts; and
- an identification of potential waivers or offsets to recognize other financial commitments resulting from development.

The Town will monitor the use of impact fee credits (both offsets and reimbursements) and will track and report liabilities associated with these credits.

Development impact fees will be assessed for the purposes allowed by law. The Town is allowed to adopt impact fees for the following:

- Libraries
- Parks, recreation facilities, rivers and trails and open space
- Law enforcement

~~General government~~

~~Transportation~~

~~The Town shall conduct a review of its development impact fees every **3 years**.~~

8. Capital Improvement Program

The purpose of the Capital Improvement Program is to systematically identify, plan, schedule, finance, track and monitor capital projects to ensure cost-effectiveness as well as conformance to established policies.

~~The Town Manager will **annually** submit a **10-year** Capital Improvement Program for review by the Town Council pursuant to the timeline established in the annual budget preparation schedule. A **5-year** program would be more accurate and give the public more assurance that all of the projects within the plan will be completed, but the Town's level of income is such that a full **10-years** is needed to accumulate enough funds to include any significant improvements. Submission of the Capital Improvement Program shall be consistent with the requirements of Title 42, Chapter 17, Article 3 of the Arizona Revised Statutes. The Capital Improvement Program will incorporate a methodology to determine a general sense of project priority according to developed criteria.~~

The Capital Improvement Program shall provide:

- A statement of the objectives of the Capital Improvement Program and the relationship with the Town's General Plan, program master plans, necessary service levels, and expected facility needs.
- An implementation program for each of the capital improvements that provides for the coordination and timing of project construction among various Town programs.
- An estimate of each project's costs, anticipated sources of revenue for financing the project, and an estimate of the impact of each project on Town revenues and operating budgets. The *operating impact information* shall be provided for the period covered in the Town's current **10-year** Capital Improvement Program. No capital project shall be funded unless operating impacts have been assessed and the necessary funds can be reasonably anticipated to be available when needed for the systematic improvement and maintenance of the Town's capital infrastructure.
- Revenues and project costs will be calculated in current dollars.
- Debt ratio targets that comply with the Debt Management section of these policies.
- A schedule of proposed debt issuance.

The Town will match programs and activities identified in the Capital Improvement Program with associated funding sources. The Town will also seek to match project costs with project users, with may require the issuance of debt to allow future users to pay in the future and to maintain intergenerational equity.

When current revenues or resources are available for capital improvement projects, consideration will be given first to those capital assets with the shortest useful life and to those capital assets whose nature makes them comparatively more difficult to finance with bonds or lease financing. Using cash for projects with shorter lives and bonds for projects with longer lives facilitates intergenerational equity, wherein projects with long useful lives are paid over several generations using the project through debt service payments.

Commented [YK2]: The town has a 10 year CIP 2011-2021; but looking at the prior budgets, it appears that the CIP projects were intended to be funded by grants.

I have all along been thinking about a CIP program that intends to use realistic revenue source to pay for; but I do need professional help to get this done. When I do, I believe road/transportation projects should be priority. The 2012 PARA study has identified 30 millions of dollars of road projects for the future (\$4 million for the near term of 5 years). PARA 's driving force was growth and multimode traffic model not operation "nuts and bolts". Nonetheless, it contains relevant information. If council wishes for another CIP, I can look into it. It will take time and resource.

Additionally, instead of new infrastructure projects which is the CIP all about, staff has developed a multiyear paved road maintenance plan. Staff is working on a unpaved road plan. Towards that end, I have told the Council recently that I would like to have an independent engineer firm to conduct a visual inspection of all roads or just the dirt roads and give a rough cost estimate. This report will be focusing on the nuts of bolts of the road service.

Capital improvement projects will not be authorized or awarded until the funding sources have been identified to finance the project and operating costs have been accounted.

Staff will monitor projects in progress to insure their timely completion or the adjustment of the Capital Improvement Program as approved by Council if a project is delayed or deferred. A **quarterly** status report will be presented to Town Council to monitor each project's progress and to identify any significant issues associated with a project. A prior year capital project status report shall be presented to the Town Council for information purposes when the capital improvement budget is considered.

Within **90 days** of the completion of a capital project any remaining appropriated funds for the project will be closed off and will revert to the fund balance of the funding source.

The Capital Improvement Program will be updated ~~annually~~ periodically as a multi-program effort.

9. Cash Management and Investment

Cash management includes the activities undertaken to ensure maximum cash availability and maximum investment yield on a government's idle cash, and the cash collection function.

The Town shall maintain and comply with a written Investment Policy that has been approved by the Town Council. The Chief Financial Officer, as Chief Investment Officer, or his designee shall invest all funds of the Town according to the approved Investment Policy.

The Town will collect, deposit and disburse all funds on a schedule that insures optimum cash availability for investment.

In order to maximize yields from its overall portfolio, the Town will consolidate cash balances from various funds for investment purposes, and will allocate investment earnings to each participating fund.

Bond funds will be segregated from all other funds for arbitrage and accounting purposes.

The Town will project the cash needs of the Town to optimize the efficiency of the Town's investment and cash management program.

The Town will conduct its treasury activities with financial institution(s) based upon written contracts.

Ownership of the Town's investment securities will be protected through third party custodial safekeeping.

All Town bank accounts shall be reconciled and reviewed on a **monthly** basis.

Investment performance will be measured using standard indices specified in the Town's written investment policy. The Chief Financial Officer shall provide the Town Council with a **quarterly** investment report within **45 days** of the end of each **quarter**.

The Town's Cash Management and Investment processes will be in accordance with written internal controls and procedures.

10. Debt Management (policy reserved)

10. Town currently does not issue debt securities. However, Town Council desires to establish thoughtful debt management policies when Town begins to issue debt security. For consideration of debt management policies:

It is the Town's intention to utilize long term debt to finance capital projects with long useful lives. Financing capital projects with debt provides for an "intergenerational equity," as the actual users of the capital asset pay for its cost over time, rather than one group of users paying in advance for the costs of the asset.

The purpose of this debt management policy is to provide for the preservation and eventual enhancement of the Town's bond ratings, the maintenance of adequate debt service reserves, compliance with debt instrument covenants and provisions, and required disclosures to investors, underwriters and rating agencies. These policy guidelines will also be used when evaluating the purpose, necessity and condition under which debt will be issued. These policies are meant to supplement the legal framework of public debt laws provided by the Arizona Constitution, State Statutes, Town incorporation documents, federal tax laws, and any future bond resolutions and covenants.

The Arizona Constitution limits a Town's bonded debt capacity (outstanding principal) to certain percentages of the Town's secondary assessed valuation by the type of project to be constructed. There is a limit of **20%** of secondary assessed valuation for projects involving water, sewer, artificial lighting, parks, open space, and recreational facility improvements. There is a limit of **6%** of secondary assessed valuation for any other general-purpose project.

All projects funded with Town general obligation bonds or revenue bonds must be included in the Town's Capital Improvement Plan and can only be undertaken after voter authorization is obtained through a Town-wide bond election.

The overall debt management policy of the Town is to ensure that financial resources of the Town are adequate in any general economic situation to not preclude the Town's ability to pay its debt when due.

The Town will not use long-term debt to fund current operations or projects that can be financed from current revenues or resources. The Town will first attempt to utilize "pay as you go" capital financing and/or the use of operating funds or impact fees where applicable.

The Town does not intend to issue commercial paper (CP) or bond anticipation notes (BANs) for periods longer than **2 years** or for the term of a construction project. If CP or a BAN is issued for a capital project, it will be converted to a long-term bond or redeemed at its maturity.

The issuance of variable rate debt by the Town will be subject to the most careful review and will be issued only in a prudent and fiscally responsible manner.

The Town shall make every effort to combine debt issuances in order to minimize issuance costs.

Commented [YK3]: Option 1 delete this section. Option 2 see mark up.

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Whenever the Town finds it necessary to issue tax-supported bonds, the following policy will be adhered to:

- Tax supported bonds are bonds for which funds used to make annual debt service expenditures are derived from Ad Valorem Tax (property tax) revenue of the Town.
- The target for the maturity of general obligation bonds will typically be between **20 and 30 years**. The target for the “average weighted maturities” for general obligation bonds of the Town will be **12 years and 6 months**.
- Where applicable, the Town will structure general obligation bond issues to create level debt service payments over the life of the issue.
- Debt supported by the Town’s General Fund will not exceed **10%** of the annual General Fund revenues.
- Secondary property tax rates will be determined each year as part of the budgetary process (pursuant to State law) to pay the necessary debt service payments of general obligation bonds currently outstanding or expected to be issued within the fiscal year.
- In accordance with requirements of the State of Arizona Constitution, total bonded debt will not exceed the **20%** limitation and **6%** limitation of the total secondary assessed valuation of taxable property in the Town.
- Reserve funds, when required, will be provided to adequately meet debt service requirements in subsequent years.
- Interest earnings on bond fund balances will only be used to pay debt service on the bonds unless otherwise committed for other uses or purposes of the project.
- The term of any bond will not exceed the useful life of the capital project/facility or equipment for which the borrowing is intended.

Revenue bonds are defined as a bond on which the debt service is payable from the revenue generated from the operation of the project being financed or a category of facilities, from other non-tax sources of the Town, or from other designated taxes such as highway user’s revenues, excise tax, or special fees or taxes. For any bonds or lease-purchase obligations in which the debt service is paid from revenue generated by the project and/or partially paid from non-property tax sources, that debt service is deemed to be revenue bonds and are excluded from the calculation of the annual debt service limitation. Whenever the Town finds it necessary to issue revenue bonds, the following guidelines will be adhered to:

- Revenue bonds of the Town will be analyzed carefully by the Finance Department for fiscal soundness. Part of this analysis shall include a feasibility report prepared by an independent consultant prior to the issuance of utility supported revenue bonds to ensure the generation of sufficient revenues to meet debt service requirements, compliance with existing bond covenants and to protect the bondholders.
- Revenue bonds should be structured to provide level annual debt service over the life of the issue.

- ☑ Debt Service Reserve Funds will be provided when required by rating agencies, bond insurers or existing bond covenants.
- ☑ Interest earnings on the reserve fund balances will be used to pay debt service on the bonds unless otherwise committed for other uses or purposes of the project.
- ☑ The term of any revenue bond or lease obligation issue will not exceed the useful life of the capital project/facility or equipment for which the borrowing is intended.
- ☑ The target for the term of revenue bonds will typically be between **20 and 30 years**. The target for the “average weighted maturities” for revenue bonds of the Town (except for those issued through the Arizona-Water Infrastructure Finance Authority) will be **12 years and 6 months**.

Improvement District (ID) and Community Facility District (CFD) Bonds shall be issued only when the formation of the district demonstrates a clear and significant purpose for the Town. It is intended that Improvement District and Community Facility District bonds will be primarily issued for neighborhoods desiring improvements to their property such as roads, water lines, sewer lines, street lights, and drainage. The District must provide a specific benefit to the property owner(s). The Town will review each project through active involvement of Town staff and/or selected consultants to prepare projections, review pro-forma information and business plans, perform engineering studies, and analyze minimum debt coverage and value to debt ratios, and other analyses necessary to consider the proposal against specified criteria. Both ID and CFD bonds will be utilized only when it is expected that they will be outstanding for their full term.

An expanded policy will be maintained detailing the policy and procedures of the Town related to any future consideration of the formation of a Community Facilities District. Use of a CFD would require compliance with the new guidelines and procedures and specific Council approval.

Refunding bonds will be measured against a standard of the net present value debt service savings exceeding **5%** of the debt service amount of the bonds being refunded, or if savings exceed **\$250,000**, or for the purposes of modifying restrictive covenants or to modify the existing debt structure to the benefit of the Town.

The investment of bond proceeds shall at all times be in compliance with the Town’s Investment and Portfolio Policies and meet all requirements of bond covenants. The Town shall comply with all U.S. Internal Revenue Service arbitrage rebate requirements for bonded indebtedness. The Town shall comply with Arizona Revised Statutes and all other legal requirements regarding the issuance of bonds and certificates of the Town or its debt issuing authorities. The Town will maintain contact with rating agencies through meetings and visits on and off-site. The Town will secure ratings on all bonds issued when economically feasible.

The Town shall maintain a debt profile for all bonds issued and update the profile on an annual basis. The debt profile shall include specific information regarding the size and type of debt issued, projects financed by the bonds, debt service schedules and other pertinent information related to each specific bond issue.

11. Risk Management

Risk management has become increasingly important in guarding against economic loss and in ensuring public safety in a time of increasing public liability and litigation. Risk management is involved in the identification, evaluation, and treatment of the Town's risk.

The Town shall make diligent efforts to prevent or mitigate the loss of Town assets and to reduce the Town's exposure to liability ~~through training, safety, risk financing and the transfer of risk when cost effective.~~

~~When cost effective, the Town shall manage its exposure to risk through self-insurance or through the purchase of traditional third-party insurance in the following areas: general liability, automobile liability, public officials' errors and omissions, police professional liability, property loss and workers' compensation. The use of risk-pooling opportunities should be maximized, e.g., by use of the Arizona risk retention pool.~~

~~When cost effective, the Town will further control its exposure to risk through the use of "hold harmless" agreements in Town contracts and by requiring contractors to carry liability insurance, including errors and omissions coverage for architectural, engineering, and other applicable professional firms.~~

~~Insurance reserves shall be maintained at a level which, together with any purchased insurance, will adequately indemnify the Town's assets and its elected officials, officers and directors against loss. A study will be conducted every **3 years** for potential liability areas and shall be used as a basis for determining self-insurance reserves based on historical loss data. The Town will strive to fully fund actual and estimated liabilities including reserves for incurred but not reported (IBNR) claims.~~

~~The Town will identify and disclose material contingent liabilities in the Town's Comprehensive Annual Financial Report (CAFR).~~

~~Cost allocations to various funds will be based on an analysis of contributing factors.~~

12. Accounting, Auditing and Financial Reporting

Accounting, auditing and financial reporting form the informational infrastructure for public finance. Internal and external financial reports provide important information to the Town's legislative body, management, citizens, investors and creditors.

The Town will comply with accounting principles generally accepted in the United States in its accounting and financial reporting, as contained in the following publications:

- Codification of Governmental Accounting and Financial Reporting Standards, issued by the Governmental Accounting Standard Board (GASB).
- Pronouncements of the Financial Accounting Standards Board, (FASB).
- Governmental Accounting, Auditing, and Financial Reporting (GAAFR), issued by the Government Finance Officers Association (GFOA) of the United States and Canada.
- Municipal Budget and Finance Manual, prepared by the League of Arizona Cities and Towns.
- Audits of State and Local Governmental Units, an industry audit guide published by the American Institute of Certified Public Accounts (AICPA).
- Government Accounting Standards, issued by the Comptroller General of the United States.
- U.S. Office of Management and Budget (OMB) Circular A-133, issued by the U.S. Office of Management and Budget.

Quarterly financial reports will be provided for all programs summarizing financial activity comparing actual revenues and expenditures with budgeted amounts.

A system of internal accounting controls and procedures will be maintained to provide reasonable assurance of the safeguarding of assets and proper recording of financial transactions of the Town and compliance with applicable laws and regulations.

In accordance with State law, a comprehensive financial audit, including an audit of federal grants according to the Single Audit Act and the OMB Circular A-133, will be performed **annually** by an independent public accounting firm, with the objective of expressing an opinion on the Town's financial statements. The Town will prepare its financial statements in accordance with applicable standards and will account for its operations in a manner consistent with the goal of obtaining an unqualified opinion from its auditors.

[The Town will prepare a Comprehensive Annual Financial Report \(CAFR\) in accordance with the principles and guidelines established by the Government Finance Officers Association "Certificate of Achievement for Excellence in Financial Reporting" program. Staff will issue the CAFR to the Town Council by the 2nd Council meeting in November and to the Government Finance Officers Association by ~~December 31st~~ of each year for the preceding fiscal year or as required by the Arizona Revised Statutes.](#)

[When the Town utilizes bonds to fund programs, All](#) programs will provide notice of all significant events and financial and related matters to the Chief Financial Officer for the Town's annual disclosures, as required by the SEC Rule 15c2-12, for the municipal markets, financial

statements and bond representations. A listing of significant events is included in **Appendix A** to this document. The Chief Financial Officer will notify all Nationally Recognized Municipal Securities Information Repositories of these significant events.

The Town's Comprehensive Annual Financial Report (CAFR) will include the bond related on-going disclosure requirements and will fully disclose all significant events and financial and related issues. The Town will provide the CAFR to the Town Council, rating agencies, municipal bond insurers, national bond disclosure repositories and other interested parties.

13. Policy Review

By their nature policies must change and evolve over time. As with any other policies, these financial policies should be subject to periodic review and revision. ~~Accordingly, the Town Council will review and affirm the financial policies contained in this document every 3 years.~~

Commented [YK4]: Once again, this requires resources that we currently do not have.

Appendix A: Reporting of Significant Events (Continuing Disclosure Requirements)

If knowledge of the occurrence of a listed event would be material to the Town, the Town shall promptly file a "Notice of Material Event" with the Municipal Securities Rulemaking Board and with each depository. The following events are defined as significant events with respect to municipal securities:

- Principal and interest payment delinquencies.
- Non-payment related defaults.
- Unscheduled draws on debt service reserves reflecting financial difficulties.
- Unscheduled draws on credit enhancements reflecting financial difficulties.
- Substitution of credit or liquidity providers or their failure to perform.
- Adverse tax opinions or events affecting the tax-exempt status of the securities.
- Modifications to rights of holders (i.e., owners).
- Bond calls (which are other than mandatory or scheduled redemptions, not otherwise contingent upon the occurrence of an event are optional or unscheduled).
- Defeasances.
- Release, substitutions or sale of property securing repayment of the securities (including property leased, mortgaged or pledged as such security).
- Bond rating changes.

Agenda Item 4.1. Attachment - Tentative Agenda List

- ⊕ Ordinance X (time of adjournment) (received through email on July 29; part 1 of the proposed changes made on 7/14/2015)
- ⊕ Ordinance XX amending code section 30.031 mayoral duties (mailed materials copied to Council)
- ⊕ Mayor Announcement – Save the Museum Letter from the Gold Prospectors of Phx.
- ⊕ P&z formal report to council (Yvonne to confirm with Barry Smylie)
- ⊕ Yvonne Report regarding potential meetings with North American Industry and XXXX (mayor’s leads at the August 4 meeting) as they related to ACA grant
- ⊕ To add to Town Code the requirements per Arizona Revised Statues for a recall election and the limitations. [CAARF-CM Wright] 8-6-15
- ⊕ Grandfamily/Kinship Care Month Proclamation.

September 3, 2015 Planning and Zoning

- ⊕ p&Z suggested items for council to consider as P&Z priority list (Steven suggests a “learn list”)
- ⊕ P&Z registering for Arizona Chapter APA annual conference in Tucson.

September 8, 2015 Work Session Council

- ⊕ ADOR LGIP presentation (Deni confirmed on August 5)
- ~~⊕ building lease with CAP for the library (one year extension beginning July 1, 2016, requires a 180 day prior notice; item 3 lease agreement) no later than Sept. work session (done at August 11 meeting)~~
- ⊕ seeking water kits detail from council (\$10,000 budget amount)
- ⊕ sound financial management policy
- ⊕ survey details (maybe)

September 15, 2015 Regular Council

- ⊕ P&Z chair or Vice chair report to Council (spoke to Chair Smylie on 7/29, Chair would love to attend meetings casually and formally), steven can report to Council about the “learn list” if passes P&Z
- ⊕ Follow up on 12925 E. Main St. discussion (originally discussed at 6/16/2015 meeting ES)
- ⊕ Advisability of GPREP membership contribution in a form of agreement (letter and invoice received by YK)
- ⊕ DH HS use permit off premise sign/water tank extension (Steven)
- ⊕ Firebreak grant review and authorization to submit application (due on 10/2; council direction to apply at July 21 meeting)
- ⊕ Resolution XX to adopt the fee for ROW abandonment (direction made at June 9 meeting, 7/7 meeting made motion at consent agenda)
- ⊕ Tentative - OpenGov agreement (pending on Deni further negotiation with OpenGov regarding contract legal concerns)
- ⊕ Ordinance 15-116 amending code section 30.109 meeting protocols (requested by council at 7/14 meeting; the last ordinance of the serial of three)

Items contained within are tentative in nature. Official meeting agendas are subject to changes without further notices and will be published according to the Open Meeting Law and other applicable codes and regulations.

September 22 or 29 (tentative timeline)

- + Citizen survey 1st meeting with consultant Alexandria Wright

October 6, 2015 Regular Council (YK out of the office October 1 to 18)

- + tbd

October 8, 2015 Planning and Zoning

- + joint meeting with Council (requested at the July 9 P&Z meeting) council waiting for P&Z to work out a list first

October 13, 2015 Work Session Council

- + 2015 VOY (to occur early 2016) program plan, expectations (Judy present)
- + Wells Fargo presentation (Deni in charge)

October 20, 2015 Regular Council

- + On-call contractor contract award (PW –Ed)

October 27 (tentative) – 2nd meeting survey to determine the questionnaire and next steps

November 3, 2015 Regular Council

- + quarterly public safety report (Judy confirm availability a week before)

February 23
survey final
result and next
steps

November 5, 2015 Planning and Zoning

- + tbd

November 10, 2015 Work Session Council

- + tbd

November 17, 2015 special work session

- + tbd

November 18, 2015 Regular Council

- + tbd

December 1, 2015 Regular Council

- + ~~contract on-call contractor multi-year (Ed) scheduled for Oct. 20~~
- + mayor annual report on external memberships per ordinance 15-115

December 3, 2015 Planning and Zoning

- + tbd

Chip seal contract council award at
May 3 2016 meeting, Ed

December 8, 2015 Work Session Council

- + tbd

Items contained within are tentative in nature. Official meeting agendas are subject to changes without further notices and will be published according to the Open Meeting Law and other applicable codes and regulations.

December 15, 2015 Regular Council

- ⊕ vice mayor appointment - Town code section 30.031 Vice Mayor appointment
- ⊕ ~Judy Morgan recognition, 10 years of service for the town (since 12/27/2005);
~ Ed Hanks, 5 year of service since August 10 2010

~ June 2016 council select IT contractor
(Deni)

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