



Agenda DATE 8/5/13 TIME 8:55 am
SERVED BY Laurie Trevizo
RECEIVED BY [Signature]

SANTA FE WATER CONSERVATION COMMITTEE MEETING
CITY HALL - 200 LINCOLN AVE.
CITY COUNCILORS' CONFERENCE ROOM
TUESDAY, AUGUST 13, 2013
4:00 PM TO 6:00 PM

1. CALL TO ORDER
2. ROLL CALL
3. APPROVAL OF AGENDA
4. APPROVAL OF CONSENT AGENDA
5. APPROVAL OF MINUTES JULY 12, 2013 WATER CONSERVATION COMMITTEE MEETING
6. CONSENT AGENDA
 - A. DROUGHT, MONSOON AND WATER RESOURCE MANAGEMENT UPDATE (Rick Carpenter)
 - B. WATER CONSERVATION MARKETING, EDUCATION AND OUTREACH UPDATE: YEAR-TO-DATE (Laurie Trevizo)

DISCUSSION ITEMS:

INFORMATIONAL ITEMS:

7. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE INITIATIVES: (Councilor Ives, 50 minutes)
 - A. GROUP #1 – WATER CONSERVATION AND DROUGHT MANAGEMENT PLAN UPDATE
 - B. GROUP #2- WATER CONSERVATION EDUCATION/OUTREACH
 - C. GROUP #3- PROMOTE OUTDOOR WATER CONSERVATION
 - D. GROUP #4- REESTABLISH TREND OF NET ANNUAL REDUCTIONS IN PER CAPITA WATER USAGE
 - E. GROUP #5- PROPER REGULATION OF WATER USAGE AND WASTE AVOIDANCE BY LARGE WATER USERS
8. IDENTIFICATION OF STRATEGIES TO IMPLEMENT WORKING GROUP GOALS AND OBJECTIVES (Councilor Ives, 50 minutes)
 - A. GROUP #1 – WATER CONSERVATION AND DROUGHT MANAGEMENT PLAN UPDATE
 - B. GROUP #2- WATER CONSERVATION EDUCATION/OUTREACH
 - C. GROUP #3- PROMOTE OUTDOOR WATER CONSERVATION
 - D. GROUP #4- REESTABLISH TREND OF NET ANNUAL REDUCTIONS IN PER CAPITA WATER USAGE
 - E. GROUP #5- PROPER REGULATION OF WATER USAGE AND WASTE AVOIDANCE BY LARGE WATER USERS

MATTERS FROM STAFF:

9. FLAGSTAFF AND TUCSON PLANT LISTS

MATTERS FROM COMMITTEE:

ITEMS FOR NEXT AGENDA – TUESDAY, AUGUST 13, 2013:

Demand Elasticity, if available

CAPTIONS: August 23, 2013 @3 pm

PACKET MATERIAL: August 27, 2013 @3 pm

ADJOURN.

Persons with disabilities in need of accommodations, contact the City Clerk's office at 955-6520, five (5) working days prior to meeting date.

2013

City of Santa Fe, Water
Conservation Committee
Meeting, July 9, 2013

Fran Lucero,
Stenographer

[MINUTES – DRAFT UNTIL APPROVED]

WATER CONSERVATION COMMITTEE – JULY 9, 2013

SANTA FE WATER CONSERVATION COMMITTEE MEETING

TUESDAY, JULY 9, 2013

4:00 PM TO 6:10 PM

1. CALL TO ORDER

The meeting was called to order by Councilor Peter N. Ives, Chair, at approximately 4:00 pm on June 11, 2013, in the City Councilor's Conference Room, City Hall, Santa Fe, New Mexico.

2. ROLL CALL (NEW MEMBER INTRODUCTION)

Roll Call indicated the presence of a quorum as follows:

MEMBERS PRESENT

Councilor Peter N. Ives, Chair
Melissa McDonald, Vice Chair
Tim Michael
Doug Pushard
Lisa Randall
Stephen K. Wiman
Bill Roth

NOT PRESENT

Lise Knouse
Grace Perez
Karyn Schmitt
Giselle Piburn

OTHERS PRESENT

Councilor Rebecca Wurzbarger
Claudia Borchert, Water Resources Coordinator
Laurie Trevizo, Water Conservation Manager
Caryn Grosse, City Staff

Fran Lucero, Stenographer

The Chair extended a welcome to Mr. Roth. Mr. Roth provided a short introduction; he has been a resident of Santa Fe since 1975 and is a General Contractor. He is President Elect of the Santa Fe Area Home Builders Association and is a long-time green builder in Santa Fe and very concerned of the availability of water as it impacts the building environment.

3. APPROVAL OF AGENDA

Mr. Pushard moved to approve the agenda as presented, second by Mr. Wiman, motion carried by unanimous voice vote.

4. APPROVAL OF CONSENT AGENDA

Request to move 6(a) to Discussion Items.

Mr. Wiman made the motion to move item 6(a) off the consent agenda to discussion items, second by Mr. Pushard, motion carried by unanimous voice vote.

5. APPROVAL OF MINUTES JUNE 12, 2013 WATER
CONSERVATION COMMITTEE MEETING

Ms. McDonald moved to approve the minutes of June 12, 2013 as presented, second by Mr. Roth, motion carried by unanimous voice vote.

6. CONSENT AGENDA

- i. DROUGHT, MONSOON AND WATER RESOURCE MANAGEMENT UPDATE (Rick Carpenter) – Claudia Borchert

Mr. Wiman brought forth the concern on the use of the Buckman well fields when we are meant to be resting the aquifer. At the last meeting it was said that we would not be using the Buckman wells this summer with the 4.99 million gallons balance in demand coming from the water treatment plant. Since the last meeting, the Buckman Wells account for about 11.4% of production. I would like to hear more of the City's philosophy as far as resting the aquifer in terms of certain recharge.

Claudia Borchert: 11% in the Buckman Well field is music to my ears. Even if we double that for the rest of the year and make it 20% by the end of the year, that would be down from 2003 when it was 50-60%. The target is to continue to use the Buckman Well Field in an average year about 1,000 feet because that is basically how much water we have dedicated to the Buckman Wells and need to keep the wells in good operational condition. In the June monthly report it showed that we had used 305 ac. ft. from the City well field and 768 ac. feet from the Buckman Well Field year to date. Our ground water use thus far is not alarming to me. When I talk about the 1,000 ac. ft. minimum based on use, we are going to have years where we will have to use it any maybe up to 5,000 ac. ft. to average out and figure out our long time use.

Mr. Wiman: In the minutes it reflects we would not use the Buckman Well Field.

Ms. Trevizo: Provided verification that there might be some discrepancy as the recorder broke during the last meeting and the meeting minutes were taken from written notes.

Claudia Borchert: I don't know who would have said that, we can't – not use the Buckman Well Field. From an operational perspective and even to meet the

10,000 ac. ft. demand that we have to use some Buckman groundwater. Even in a good year or normal year.

Mr. Wiman made reference to Minutes of June 11, 2013 - Page 3, Item 6: *“Mr. Carpenter said there will not be a lot of pumping, noting the sources of supply should be sufficient to make it through the summer, including the water in the reservoirs.”*

Ms. McDonald: We have that corrected now; we have heard that it has to be 1,000 ac. ft., which is the minimum we have to pump.

Mr. Pushard: Having been to the upstream reservoirs most recently which are at historical low levels and we have significant evaporation; is that a legal right or is that physical water?

Claudia Borchert: We have been front loading production from the Buckman Diversion. If the stream flow drops below 250-300 cfs, we start having difficulties diverting from the Buckman Diversion. Knowing that this year is a year likely to have a reduction in Rio Grande water, we have really tried to use BDD as much as we possibly could up until now.

Mr. Pushard: When you say 1000 ac ft. do you mean by month or by year?

Claudia Borchert: That is by year.

Mr. Pushard referenced Rick's memo. Is that a legal right or physical water?

Claudia Borchert: It is physical water. We haven't taken any of our 2013 water out of Heron yet so that hasn't suffered any losses. We have 5,000 from Heron, another 5,000 in Abiquiu. When you see Abiquiu and it looks low it is a small amount inside of 180,000 ac. ft. reservoir and another 15,000 in Elephant Butte.

Claudia Borchert: It is physical water. We haven't taken any of our 2013 water out of Heron yet so that hasn't suffered any losses. We have 5,000 from Heron, another 5,000 in Abiquiu. When you see Abiquiu and it looks low it is a small amount inside of 180,000 ac. ft. reservoir and another 15,000 in Elephant Butte.

Mr. Pushard: My question goes back to the upper ones, is there a number where by those releases would be limited if a lake gets so low that our rights could be impacted?

Claudia Borchert: I don't know that I would say our rights could be impacted but the ability to deliver it could be impacted. For example if we ran out of what they call "prior and paramount" water which is being delivered out of Abiquiu and supplemental minnow water out of Abiquiu, the natural flow at

MINUTES

Otowi is 250 cfs. 1) Do we want to flow our water on top of that 250 cfs and have it get to us, 2) once it gets to Otowi and the Rio Grande is there more than 150 cfs in the river so we can divert it to our diversion facility which dries out. That is a potential we could face that this fall.

Chair Ives: Rick in an earlier session had indicated that the McClure and the Rio Grande reaches 350 cfs and that was the point where there is a worry on whether or not if we did any releases if it would actually reach Santa Fe for us.

Claudia Borchert: 325 cfs is when water gets curtailed, we have taken preemptive step on that and we are only diverting San Juan/Chama water right now as of the beginning of July. Only the Native Americans or the minnow are getting water from a native source. From 325 down to 200 we should be able to have full supply; it is from 200 to 150 that the physical water in the river is diminished.

Mr. Roth: When you are getting these flow rates are they natural flow rates without the addition of any converting water.

Claudia Borchert: These are actual gauge readings. Like today, half the flows at Otowi are probably San Juan Chama flows. If it were coming from the Rio Grande branch, it would be more of the natural flow. Most of what comes from the Chama is not a natural flow.

Chair Ives asked about Albuquerque having at least 40,000 acre feet, is that some of the water that is currently in the river to support minimum other uses through the Albuquerque area?

Claudia Borchert: Yes, the last time I checked on it about July 1st, they had 32,000 of the 40,000 left and they anticipated if they released on the 200 cfs pattern they would have 80 days of flow which would put them 3 months out, through the end of September. Their biological opinion has them trying to go until the end of October. With the rains they just had they were reduced from 200 to 100 because they are trying to make that chunk of water last as long as possible.

Mr. Pushard: The fires I heard had come over the peak and in to the watershed.

Claudia Borchert: I did not hear that.

Chair Ives: With these flash flood notices, is it putting water in our reservoirs; do you have a sense where the effect is. Our neighbor's rain gauge measured 2" in a 30 minute period.

Claudia Borchert: Before the storm yesterday, all the other storms had not done anything. It really depends on where the storms are. Sol y Lomas was affected.

Ms. Trevizo: Our demand was down from last week to this week due to the rains. This week is 12.3 million gallons per day vs. last week of 13.1 million gallons per day.

The Chair expressed his thanks to Claudia for her participation.

INFORMATIONAL ITEMS:

7. SPECIAL PRESENTATION BY AMY LEWIS ON DOMESTIC WELLS (Chair Ives, 20minutes) - Exhibit A

Notes of Reference: OSE reports 8, 200 domestic wells. Q: Are they self reported? A: Yes

Mr. Roth asked what the percentage is of agricultural use. Ms. Lewis stated that 80% of the water use in the state is for agriculture use. A lot of that returns back to the rivers. She informed the committee that she had not brought the report in total and if other questions came up after her presentation she would get responses to Ms. Trevizo.

Mr. Roth: On the county level as most of the attention always focuses on residential use; what kind of focus is being made to reduce agriculture use and other commercial use?

Ms. Lewis: We had a big discussion at our first Partner meeting – conservation in the agricultural sector causes more depletion. It actually consumes more water. Crops become more productive. There are reasons for doing conservation when there is a limited water supply, the farmer can meet the water demand. They are going to consume more and less will return to the system. Right now the whole balance is based on leaky acequias, that leakage going to another Acequia and then diverting it. That leakage that waits is counted on down the stream. We don't know the conditions of the farms; we don't know how much they are diverting. I have talked to the Ag Extension Agents who are supposed to track the agriculture use and they say there hasn't been a change since 2000.

Mr. Roth: As part of your contract was there any interviewing vs. gathering data in order to ask people why they were using more water than they should.

Ms. Lewis: I called a lot of people and talked to them as I also questioned the OSE data. Some people were great, others had concerns and some people are not nice to talk to. I feel that it might be better if these types of inquiries were made by people with authority.

Mr. Roth: Percentage wise, people that were part of these interviews may have been negative as there has been some debate in this Committee as to whether it would be beneficial if it was actually from the city vs. independent. I think the opinion was it might actually be more negative if it was an official from the city or the county.

Ms. Lewis: The people that objected would have preferred a government person; they didn't know who I was.

I would say that 90% of the people are fine with it.

Chair Ives extended an invitation to Ms. Lewis to visit his office at the NM Public Lands to share information.

Ms. Lewis: One of my recommendations in the report is for them to get more staff at OSE.

Thank you to Amy Lewis for attending meeting today. The Committee will look forward to receiving a copy of the final report.

8. PRESENTATION ON WESTERN ADAPTATION ALLIANCE CONFERENCE
(Chair Ives, 20 minutes) - Exhibit B

Melissa McDonald/Claudia Borchert/Grace Perez attended the conference.

Ms. Mc Donald provided a written report and circulated the printed collateral collected from the meeting for the committee's review and perusal. She stated that the objective of the Western Adaptation Alliance (WAA) is to have three conferences a year. This was a group that was created to review climate change in the Rocky Mountain Southwest and there are 11 local governments across 5 states that are members: Colorado, Arizona, Utah, Nevada and New Mexico. *(Report read to the committee members).*

The Santa Fe delegation tried to break out and attend as many of the different sessions as possible. One of the sessions Ms. Mc Donald attended was on Behavior Modification. It had all the participants in this group talked about what worked in their communities. It is similar to what our advisory group is doing in looking at what works. The areas that they felt were important were personal health, children future, trusted source and peer pressure. I think I mentioned the peer pressure at the last meeting. This addressed making people aware of our uses in relation to other people's uses. Trust in the source, I am not exactly sure as there is a lot of discussion of what that was, not too sure how to frame that particular aspect. There were some people there who were private water suppliers and some were public. It was information related to water quality, things like that. I talked about Park City and Salt Lake City; they are people who have been using meters to change behavior and are very effective. Once people really understood what their usage was in the greater community or greater neighborhood was, than people wanted to be more than the average vs. the extreme. When we see presentations like the one we just saw, or if you get a bill that says you are in the 80th percentile of water use or you are in the 20% water use in your community, whatever that definition is, that wakes people up to why it is important. Our city has been good about educating people on what is acceptable water use. I think we could go further if we had a billing system that would help us put it out there on what the average is. Going back to landscape classes in that same breakout session, we talked about the idea of educating people about what is acceptable, what is good, ways to treat the landscape. In our debriefing this month, Laurie and I have talked about this and we are looking at ways that we can help city users understand what is a good way to do effective irrigation but also look at passive water harvesting and maybe eventually look at active water harvesting in terms of reducing overall water use. Some of that is based on Tucson's model, I will talk about this in my report later. Tucson has had a lot of success in terms of getting people to recognize active and passive water harvesting, and ways to actually reduce the need for

water. If you have good passive water harvesting on your site, the likelihood of your house or your basement flooding is minimal. If you are really doing water harvesting in a passive way you are moving water across your site so it is being used effectively and then it discharges into where the appropriate place is. I think that there is a lot more we can do; I am excited about this opportunity and I feel that the City has done a lot of research on, they have a great document that I think we can utilize a lot more effectively. Tucson is doing a very good job of this and I think I will be looking a lot more in to what this community is doing.

Commercial Water Budgets Update: Boulder is doing commercial water budgets and I think as a committee we may want to look at that more and really see what those numbers are.

Some of the things that Grace was interested in mentioning was looking at organizational silos meaning how the governmental community is working. This was talked about a lot at the conference and people felt much more at ease, recognizing that people are working positively in our city. It is a good opportunity to find where people are working in their own silos, their own mind sets and no cross over. As we move in to climate change it will become more and more important or climate adaptation, as they like to say, we have to look at how do various departments in the city and the city and the county threw to the state, all work.

Perhaps we need to set up a Voluntary Network, and Advisory Board like this. Grace and Melissa are working with a group that went to WAA to look at what kind of volunteer organizational network might look like. More information to follow. The idea is to put out the top three things that we as a community are working on and get feedback.

Things that weren't quite water conservation was the idea of adaptation strategies. I did attend the Adaptation Strategy Group. One of the frustrating things was that everybody in the group was that they did not want to create something that was going to sit on a shelf and do nothing. It was very hard to figure out how to make that work. That is a lot of what this group is looking at and getting some good dialogue on.

The other thing we felt was important to mention was that we really have to have community buy-in, everybody said that what really matter is having community buy-in. We do plan to follow up with Tucson on this idea that Tucson is actually projecting development based on getting water. If you want to get water you have to build in a certain part of the city. That wasn't really water conservation but I mention it because it was something that our larger group is going to look at.

Out of our group the three things that are our takeaways are:

- 1) Explore the creation of a network of citizen Water Advisory Board within the WAA to further the exchange of ideas.
- 2) Explore adding water harvesting components to the water conservation's QWEL program for greater water savings.
- 3) Create a triple bottom-line mechanism in our city's fiscal impact process.

MINUTES

I felt very good about Santa Fe, we are in a great position, and we are moving forward in addressing these issues. I felt proud to have Claudia Borchert and Katherine Mortimer there and presenting.

People in attendance of this conference want to be contacted for information on how they are doing.

Mr. Roth: Is there any plan for Katherine Mortimer to present to the City Council?

Chair: Katherine Mortimer is constantly in touch with the council and keeping them informed on the various issues that she deals with and through this committee we stay up to date

Mr. Roth: Just speaking briefly from the perspective of the Home Builders Association and the Green Building Council, water is the issue at this point. Energy is moving along nicely, water is the elephant in the room.

Chair: The legislature formed a drought sub-committee this year which a lot of members from the Natural Resources Committee serve on and I know on behalf of this committee we have been in touch with our State Legislators throughout the session letting them know what things we do and trying to work with them and my hope is that there will be some folks sitting around the table who might have a number of suggestions to make in terms of legislation that they might consider at the state level in the next session relating to water and hopefully the work we are doing now will inform them and make it possible.

Chair: On billing, were there any municipalities doing the kind of billing we were talking about with peer pressure.

Melissa McDonald: Oh yes, the billing systems – we are way behind in our billing system. I think it is one of our weakest needs and there were some very advanced billing systems and granted some of the Cadillac one were Park City and Aspen. Talk about efficiency, they are on top of their water use.

Chair: Let me just ask, part of my frustration is that we have gone through this new billing process, I haven't been able to figure out what the goal is in terms of aggregate and in terms of structure. If you think Park City and Aspen have the Cadillac system, I would love to talk to those communities and find out what they have.

Melissa McDonald: I will get as much information as I can and bring it back to this committee.

Claudia Borchert: Recently I heard that Nick Schiavo, Public Utilities Director supports the (*Neptune* system) where all the information is transmitted via radio to a central location and that is how they collect data but it also opens doors on how much data you collect and who has access?

Chair: Wouldn't it be great if you built in an alarm system so that real time data worked say if you had a leak and you could contact the customer the next day who could take proactive steps. It would be fabulous to have that reactive response.

Laurie: Claudia is correct, Neptune is a product name and the technology is called AMI (Automatic Meter Information); that technology is available from other vendors and meter manufacturers.

Melissa McDonald: I have brought this up in the past, I feel like this is an area where this committee could be very helpful in educating the public. There is a lot of fear in opening up that type of system in terms of interest. It is a valuable use of our time to educate people on why this is important and to look at ways that it could be structured. I would like to see this committee get more active in supporting this.

PNM is going to use the Opt In system and there is no billing change required.

Melissa McDonald: We don't want to down play the EM issue as it affects many.

The Chair suggested the consideration of hosting the WAA here in Santa Fe.

9. IDENTIFYING POSSIBLE "NEW NORMAL" SOLUTIONS (Chair Ives, 10 minutes)

The Chair mentioned a few things the committee may want to consider as they moved forward.

- Chem Toilets Plaza Cafe – estimated water saving from Chem Toilets is 20,000 to 40,000 gallons at least in the commercial context of restaurants. Is this something we want to build in to our building codes.
- Slowing water down and getting it back in to the ground, finding storage.
- Moving to grey and black water systems, working with EID to try to figure out how to use those and I realize that slabs make those hard for homes in town. That type of re-use in the home context which we are currently trying to promote in the business context with the new Ordinance we just passed, is another potential way of recycling water and saving more. There are many more very local to specific residences to business items we can start to look at. I want to make sure we take off any constraints as we start to talk about those opportunities so that we can fully educate ourselves on how they could be worked in to our building codes.

10. GROUP REPORTS FROM WATER CONSERVATION COMMITTEE

INITIATIVES INCLUDING IDENTIFYING OBJECTIVES AND GOALS OF INITIATIVES (Chair Ives, 60 minutes)

Group #1 – Water Conservation and Drought Management Plan Update

Doug Pushard reporting for Grace: Group 1 is tasked with helping update the Water Conservation Management Plan. We are about 60% done with the document and we believe within two meetings we could be doing hard edits on this document. We are progressing smoothly. Note: We should add Amy's report to the list of reports to consider any input or consideration. Next meeting date not scheduled at this time but stated they are ahead of schedule.

Chair: Is the format dictated by the OSE?

Laurie Trevizo: There is a State Statute that and it requires us to tie in some of the regional planning efforts with the Jemez and Sangre that Amy mentioned, but it does not dictate the format.

Chair: In which case, presumably we could add new things that haven't been in there before. Again I would say let's take off the all the constraints.

Doug Pushard: Noted at the 3:00 pm session today; we agreed to hold a Strategy Session, with results as an attachment to the report. Mr. Pushard asked for any comments be sent to Grace or him over e-mail.

Melissa McDonald: Is this report submitted from your office, Laurie?

Laurie Trevizo: That is correct.

Melissa McDonald: I see that you will have it come to the Committee as an informational update so will we get to see that final report? If I have input do I contact Laurie or provide the information to Doug or Grace?

Laurie Trevizo: If you want to have any input I would suggest you join our committee.

Chair: Questions on the Chart: The informational update, the PUC WCC that is has a start date of 12/31/14 end date of 1/27/2015 which is after the report is due to the OSE.

Claudia: Section 4: There have been two topical updates to the regional water plan; 2 on climate change, 1 on reclaimed waste water numbers, make sure to use the whole body of the most recent updates. Mr. Pushard will send an e-mail to Claudia to obtain those updates.

Group #2- Water Conservation Education/Outreach

Steve Wiman: The main thing that has come out of our meeting is formalizing what we want to do with reviving the Water Conservation Committee road show (slide presentation), updating it including the recent GPCD and also the voluntary guidelines. One of the things that I have mentioned before is how successful it is in Albuquerque to get a water bill credit for attending these meetings. We don't want to link that with the road show, it is a separate issue and we have an alternate for that as well. Part of the potential success of the road show would be city support and more importantly advertising. We could only advertise by flyers in a limited way and we have had very poor attendance. I would like to discuss what the Water Conservation Committee feels in reviving that.

The Chair said he would have no problem with trying to do a promotion like that but it has to be a presentation that is approved by this Committee and we are all engaged in that. There has to be buy in from this Committee and I will check with the Water Division to see what type of oversight or review they would want in it as well. If you get

the approvals from the city we have a great possibility of getting it out in to the community.

Mr. Wiman: How do we get to that next stage?

Chair: Get to your current talk; bring your power point slides to this committee to review and to assure that we can concur. The chair recommended that the power point be sent to the members prior to the meeting; allow 30 minutes during the meeting to recap.

Melissa McDonald: There has to be some discussion as to what is appropriate to say with the city representation in it. We need to identify a go to person after they see the presentation.

Laurie Trevizo: Melissa is correct, all committee members Sign a Code of Ethics and therefore they represent this city, they are city representatives so at that point in them they would be representing the city point of view.

Steve Wiman: I would like to see the city put this together and let us present it. Why should we spend months trying to outguess what would be acceptable to the city. I am perfectly fine in presenting an approved presentation myself.

Chair: Let's talk about the parameters of that presentation, the content, the message we want to get out, we do have a wealth of material.

Steve Wiman can e-mail the presentation to the Chair and Laurie Trevizo as it stands today and they can strategize and update. The Chair will meet with Laurie before the next meeting.

GROUP #3- PROMOTE OUTDOOR WATER CONSERVATION

Doug Pushard: Today the plant list was sent out. (Exhibit C) It is a spreadsheet with verbiage included; please note that this is a **draft**. Mr. Pushard asked the committee members to send him any updates on the document as they now have it electronically to distribute to people as well.

Doug and Bill will be meeting with the home builders. There should be a good discussion as they are very interested in water. The next meeting Bill and I will have is to sit down with Katherine and discuss the building codes and commercial remodeling.

Chair: Having seen that announcement and taking in to consideration the interest and assessment from local leaders, was that language drafted by Kim?

Doug Pushard: I did not draft or see that language until today.

Doug Pushard: I am not doing a presentation, doing a brain storming and talking about where we are and gather their ideas of things we should look at. Since they are the Home Builders Association they will have to support anything we do from the regulation and building code.

Chair: Plant lists from Tucson and Flagstaff – The chair asked Caryn to obtain these lists for him.

Group #4- Reestablish Trend of Net Annual Reductions in Per Capita Water Usage

Noticed in the paper that some county residents are being annexed and they should get information on Water Conservation.

Group #5- Proper Regulation of Water Usage and Waste Avoidance by Large Water Users
(Exhibit D)

MATTERS FROM STAFF:

Ms. Trevizo asked the Committee members to adhere to the dates that material has to be in for agenda processing and posting. The deadline time is 3:00 pm and the date is August 1st. Thank you.

MATTERS FROM COMMITTEE:

Are voluntary guidelines going out in the water bills this month?
Some went out and the remaining will be received in August.

Brochure Request and Dissemination: Instructions are to fill out the form as distributed and return to Laurie.

ITEMS FOR NEXT AGENDA – TUESDAY, AUGUST 13, 2013:

Demand Elasticity, if available.
Email agenda items.

CAPTIONS: JULY 30, 2013

PACKET MATERIAL: AUGUST 1, 2013 – 3:00 pm

ADJOURN

There being no further matters to come before the Water Conservation Committee, the meeting was adjourned at 6:10 pm.

MINUTES

Signature Page:

Councilor Peter Ives, Chair

Fran Lucero, Stenographer

MEMORANDUM

TO: City of Santa Fe Public Utilities Committee
City of Santa Fe Water Conservation Committee
Buckman Direct Diversion Board

FROM: Rick Carpenter, Water Resources and Conservation Manager *RC*

VIA: Nick Schiavo, Acting Public Utilities Department and Water Division *NSA*
Director

DATE: July 25, 2013

SUBJECT: Update on Drought, Monsoon, and Water Resource Management

CURRENT PUC UPDATE

As the Committee is aware, our region is still suffering through a severe drought. Our region has gone through two consecutive years of record drought and heat. It is now apparent that we are in a third consecutive year of severe drought and heat which will present significant challenges to all water purveyors and irrigators. Most of the state of New Mexico is in "extreme" drought conditions or worse. New Mexico appears to be the epicenter of the regional drought. This situation is unprecedented and the City's Water Division takes this situation very seriously.

The National Oceanographic and Atmospheric Administration (NOAA) recently updated its monthly on its El Nino/Southern Oscillation (ENSO) Diagnostic. This report indicates that current model predictions more strongly favor El Nino conditions to be neutral through the summer of 2013 (equal chances of either wet, dry, or "normal"). The long-term forecast for this coming winter seems to be trending away from El Nino, towards neutral, with an increasing chance of a return to La Nina conditions. Above average temperatures are also expected. This current drought is extreme, but what sets it apart from previous extreme droughts is that, absent significant monsoonal rains and winter snow the rest of this year, the region will enter into next spring and summer without carry-over water in regional reservoirs – they are at historic low levels. This condition is unprecedented and could make next year much more challenging than the current year. However, the City of Santa Fe has invested in a robust and diverse portfolio of four distinct water supply sources that allows for flexibility in meeting demand: Buckman well field, City well field, Canyon Road Water Treatment Plant on the Upper Santa Fe River, and the Buckman Direct Diversion on the Rio Grande.

Water Resource Management

In accord with recent BoR/USACoE models that indicated the probability of critically low flows in the Rio Grande, the last few weeks have seen flows as low as about 250 cubic feet per second (CFS). In a "normal" year flow ought to be around 1,000 cfs or more. Turbidity has also been

high, especially following intense monsoonal rain storms. For this reason, the BDD Project has been shut down for several days so far in the month of July. Also, the Canyon Road Water Treatment Plant may also experience significant supply shortfalls later this year. However, City water resource managers are closely monitoring the water supply situation and are prepared to offer a variety of options to decision-makers. For example, the City has several years-worth of San Juan-Chama Project water stored in reservoirs, in case deliveries from the federal Bureau of Reclamation of San Juan-Chama Project water are curtailed and/or native flows are unavailable. The City could therefore choose to release some of that water if needed. Additionally, the City has been “resting” the Buckman well field since early 2010 in case decision-makers opt to pump significant amounts of water from the aquifer. Local reservoirs on the upper Santa Fe River currently have about 32% of full capacity, or enough water to average about 3-4 million gallons per day of production from the Canyon Road Water Treatment Plant, July through August, 2013. Also, policy makers may consider implementation of Emergency Drought Stages pursuant to the Conservation Ordinance. Therefore, City decision-makers and resource managers have a variety of policy options available in order to meet water supply demands during times of drought.

Local Conditions – Upper Santa Fe River

| | Reservoir Level | Santa Fe Snow Gage | Reservoir Inflow |
|---|-----------------|--------------------|------------------|
| July 25, 2013 | 32.0% | 0.0 inches | 2.33 MGD |
| 5-Year Average This Date (2008 – 2012) | 68.2% | 0.0 inches | 2.90 MGD |

The City of Santa Fe has rights to a total of up to 5,040 acre-feet per year in Nichols and McClure Reservoirs. City Water Division staff are estimating receiving only about 1,200 – 1,300 acre-feet of water from the upper Santa Fe River watershed this year. It is anticipated that this water will be available beginning in June through August, but there will be little to no usable carry-over storage in the local reservoirs without significant moisture/snow between now and next high-demand season. As of the date of this memo, there is no snow pack left in the upper watershed.

Rio Grande Basin

Surface flows in the Rio Grande and its tributaries have been well below normal, storage levels in regional reservoirs are very low currently, and the federal BoR recently stated that if there is no “meaningful moisture” received this winter/spring then this would mark the lowest water levels ever in New Mexico reservoirs prior to entering into a new irrigation season. With large moisture deficits deeply entrenched across the region, meaningful improvement seems unlikely. For example, the most recent forecast of runoff into the Rio Grande at Otowi Gage (upstream from the BDD diversion structure) is for about 17% of normal flow. Legal and hydrologic compliance with the various Biological Opinions (Endangered Species Act, e.g., silvery minnow) in the middle and upper reaches of the Rio Grande will become very difficult, if not impossible, through the summer months.

As indicated earlier in this memo, currently flows in the Rio Grande at the BDD are critically low. Over the last few weeks, the river in this location as had flows as low as about 250 cubic feet per second (CFS). In a “normal” year flows at this time ought to be around 1,000 cfs or more. Turbidity has also been high, especially following recent intense monsoonal rain storms. For this reason, the BDD Project has been shut down for several days so far in the month of July.

Wild Earth Guardians has recently filed a notice of intent (NOI) to file suit against Middle Rio Grande Collaborative Program signatories, citing violations of the current Biological Opinion under the auspices of the Endangered Species Act. However, the BDD Project is not a signatory to the Collaborative Program so the Project is not currently named. The outcome of the NOI and possible subsequent law suit are uncertain at this time.

San Juan Basin

The streamflow forecast for the San Juan River Basin is 75 percent of the 30 year avg. (1981-2010). The San Juan-Chama Project delivery forecast was recently updated by BoR. BoR is now projecting a full allocation of San Juan-Chama Project water to San Juan-Chama contractors for this year (up from a previous forecast of only 80%). However, because much of this water has already been used by the larger purveyors and irrigators in the middle Rio Grande, and because what little water that might be released from upstream reservoirs could suffer abnormally significant “carriage losses” during travel from the reservoirs downstream to the diversion(s), smaller San Juan-Chama contractors like the City of Santa Fe and Santa Fe County may have difficulty later this summer/fall because the water that is called for may suffer significant carriage losses or possibly not even reach all the way downstream for diversion. Further, conditions could significantly worsen for San Juan Chama Project deliveries next year if the drought persists due to a lack of carry-over storage in Heron Reservoir and other reservoirs in the system. If conditions do not change, after deliveries are made out of Heron Reservoir this year, that reservoir will be heading into the next water –year at historically low levels.

City of Santa Fe, New Mexico

memo

Date: August 7, 2013

To: Public Utilities Committee

From: Laurie Trevizo, Water Conservation Manager *LT*

Via: Rick Carpenter, Water Resources and Conservation Manager *RC*
Nick Schiavo, Public Utilities Department and Water Division Director *NSA*

RE: Water Conservation Marketing, Education and Outreach Update: Year-to-date activities

Water Conservation Marketing and Outreach Plan:

In the midst of a 3rd consecutive year of drought, targeted marketing, education and outreach are essential to any Water Conservation Program. A marketing professional was hired in 2011 to provide the Water Conservation Office with a detailed marketing plan including expertise in branding and targeted outreach. The purpose of the outreach plan is to provide proactive and coordinated strategies for on-going community appreciation, continued involvement and greater participation in water conservation programs. The plan includes integrated communications to promote actions that achieve long-term reductions in water use and proactively inform the public about lower water use in response to drought or other supply reductions for different stakeholder groups, agencies, partners and customers. To date the Water Conservation Office has been following the 2011 Council approved plan.

It's also important to note that all activities listed below were completed by only two full time employees in the Water Conservation Office.

Results and Effectiveness of Water Conservation Outreach and Education:

Website:

- Water Conservation website www.savewatersantafe.com launched on May 26, 2013
 - **68,531** hits and visits since launch
 - Average page view surpasses industry standard (Website data attached)
 - Most downloads are for rebate forms

Rebates:

Increase in the amount of Rebate applications for 2013:

| Rebate Type | Number of Rebates 2013: <i>January – July 15</i> | Number of Rebates 2012: |
|--------------------------------------|---|--------------------------------|
| High Efficiency Toilet (Residential) | 147 | 254 |
| High Efficiency Toilets (Commercial) | 261 | 6 |
| Clothes Washer (front loader) | 14 | 41 |
| Clothes Washer (top loader) | 350 | 228 |
| Rain Barrels (50-99 gal) | 7 | 12 |
| Rain Barrels (100-199 gal) | 0 | 3 |
| Rain Barrels (200-499 gal) | 1 | 1 |
| Total Rebates Awarded: | 779 | 545 |

Demand:

Decrease in Overall Demand for summer high demand season during 3rd year of consecutive extreme drought.

| Week | Consumption (Million Gallons per Day) |
|-------------|--|
| June 24 | 14.5 MGD |
| July 1 | 13.5 MGD |
| July 8 | 12.3 MGD |
| July 15 | 11.5 MGD |
| July 22 | 10.3 MGD |

The decrease in summer demand is likely due to several interconnected activities:

- Effective, proactive and on-going strategic Water Conservation Outreach activities using a variety of communication platforms
- Launch of new website for one-stop information
- Increased and efficient enforcement
- Increase in rains and monsoonal activities in July

Monthly Consumption:

Decrease in Consumption for 2013:

| Month | 2012 Single Family Residential Consumption (million gallons) | 2012 Number of Connections | 2013 Single Family Residential Consumption (million gallons) | 2013 Number of Connections |
|--------------|---|---|---|---|
| January | 104,011,600 | 29,499 | 104,257,700 | 29,693 |
| February | 97,189,000 | 29,562 | 96,636,700 | 29,818 |
| March | 95,870,300 | 29,623 | 94,393,900 | 29,661 |
| April | 121,370,200 | 29,626 | 119,573,900 | 29,818 |
| Total | 418,441,100 | 118,310 | 414,862,200 | 118,990 |

There is an overall decrease in consumption when comparing 2012 to 2013 and an increase in the number of connections. In 2013 there is a ***3,578,900 million gallon decrease*** in consumption compared to 2012 even though there are more customers than in the previous year.

2013 Water Conservation Accomplishments:**Media Advertisements and Articles:**

- 250 monthly PSA Prime Drive Time messages on 6 Hutton Stations including Spanish language station
- Weekly 30 minute radio show on KSWV, PSA's and commercials
- Weekly PSA's on KSFR for time of day watering reminder
- 8,000 Save Water Santa Fe newsletters inserted in to Santa Fe New Mexican and Thrifty Nickel
- 5,000 Save Water Santa Fe newsletters distributed around town and events
- Print media: Green Fire Times, Home Town News, Round the Roundhouse, Santa Fe Reporter, EcoSource, 2013 Visitors Guide, 2013 Annual Manual, Santa Fe New Mexican, Journal North

Press Releases:

- Resolve to Save Water- January
- Winterization Tips and Frozen Meters - February
- How the City Manages Drought- February
- Fix A Leak Week – March
- Gallons Per Capita Per Day Announcement- March
- Mayors Water Conservation Challenge – April
- Water Fiesta – April
- Time of day Watering – May

- Children's Poster Contest- May
- New Website to Help Community Save Water – May
- City Prepared to Use Groundwater to meet Summer Demand – June
- Drought Survival Guide- July

Media coverage articles:

Associated Press – State and National Wire Service

- Santa Fe Imposes Water Restrictions
- **The Wichita Eagle** "Keys to Making Water Conservation Successful is to involve community. Santa Fe: A lot of carrot"
- **Saint Paul Pioneer** "Santa Fe Shows the Nation How to Save Water"
- **KOAT-** Santa Fe Launches new Water Conservation Website

Santa Fe New Mexican

- City Report Helps Residents Monitor Daily Water Use (front page)
- Our View: Save Water Like It's Second Nature (Mayor Challenge)
- Editorial – Conserve Water to Ease Drought
- Front-Page - Santa Fe Outdoor Water Restrictions Take Effect
- Drought, limited water supply presents challenges (Earth Week) (front-page)
- Photo & Caption – Children's Water Fiesta
- La Mariposa Montessori Student Takes Top Price in City's Water Conservation Poster Contest – includes photo

Albuquerque Journal North

- Children's Water Fiesta Article and Photos (front page)
- Editorial - Get Ready to Conserve Water
- Annual Water Conservation Rules in Effect (front-page)
- Commercial Water Rebates Offered

Santa Fe Reporter

- Running Dry. It's Earth Month; Save Some Water (Mayor Challenge)

Round the Roundhouse

- Saving Water during the Legislature
- Fix Your Flapper during Fix a Leak Week
- Rebates and other Water Saving Incentives
- Mayor's Water Conservation Challenge
- Watering Time of Day Restrictions
- Santa Fe Launches new Water Conservation Website

Events and Participation:

| | |
|-------------|--|
| March 9-10 | Santa Fe Area Homebuilders show |
| March 18-22 | Fix-A-Leak Week |
| March 18-22 | Qualified Water Efficient Landscaper (QWEL) Training |
| April 1-30 | Mayors Water Conservation Challenge |
| April 16-17 | Children's Water Fiesta |
| April 19-22 | Earth Day events |
| April 27 | Project WET teacher training |
| May 8 | Children's Poster Contest Winners awards ceremony |
| May 11 | Community Day |
| July 1-31 | Know When to Water-Bill Insert |
| July 24 | Santa Fe Bandstand co-sponsor |
| July 25 | Colorado River Day |
| August 24 | Rainwater Harvesting Community Event |
| September | Santa Fe Fiestas |

Web and Social Media:

- City Highlights Newsletter
- Facebook and Twitter Announcement – Outdoor Watering Restrictions
- City of Santa Fe Water Division Website

- Banner Ads www.santafehometownnews.com
- Fandango Movie Website Banner
- Banner Ads edible Santa Fe www.ediblesantafe.com
- Banner Ads www.Santafe.com
- Website Banners – Time of Day Watering
(KTRC Talk, Outlaw Country, ESPN, Project 101.5, Radio Free SF, blu 102.9)

Ordinance and Resolution Development:

- May - Voluntary Restrictions Resolution passed: Resulted in Bill insert for July Water Bills on how and when to water landscapes, language in print materials was changed from recommended watering no more than 3 times per week to water no more than 3 times per week.
- June – Commercial Rebate Ordinance passed: Targeted outreach will occur in Winter 2013-14.

Partnerships and Coordination:

- Santa Fe Public Schools
- Green Lodging Initiative
- Area Landscape Companies: coordination with watering schedules
- State of New Mexico, Building Services: coordination with watering schedules
- City Parks Department: coordination with watering schedules
- City Environmental Services: coordination on messaging and community events
- City Meter Reading and Transmission & Distribution staff: coordination on water waste enforcement

Future Marketing, Outreach and Education:

- Development of online rebates database
- Further development of savewatersantafe.com
- Development of an online Customer Service Portal- Public Access Module (PAM)
- Development of mobile water conservation app
- Interpretive signage for demonstration garden
- Sponsor second QWEL Training and Project WET teacher training- Fall 2013
- Expansion on AMI and AMR technologies

Attachments:
Website data

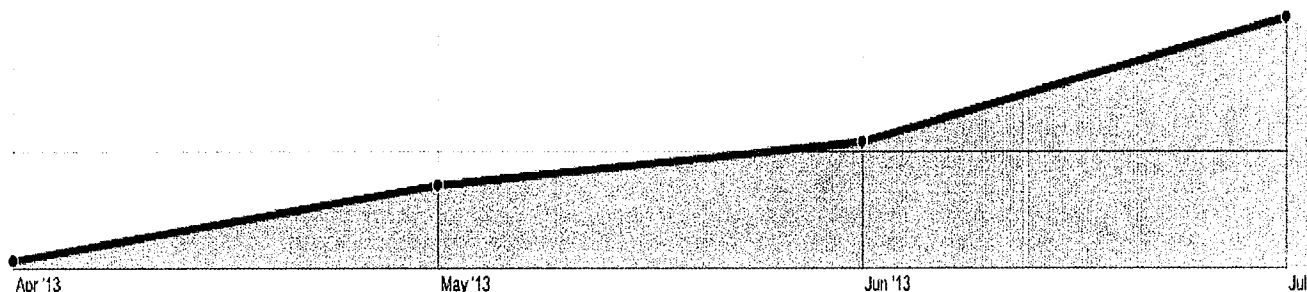
[Change Month](#) [Change Language](#)

Statistics for savewatersantafe.com[■] in July 2013

Last updated **Thursday, 25th July 2013** at 23:21 (13h 42m ago). A total of **1,042** visitors (873 unique) this month, an average of **41.7** per day (35.0 unique).

[This Month](#) [All Months](#) [Hours](#) [Browsers](#) [Countries](#) [Visitors](#) [Filetypes](#) [Downloads](#) [Operating Systems](#) [Pages](#)
[Referrers](#) [Spiders](#) [Searches](#) [Sessions](#) [Status](#)

Visitors each Month

[Visitors each Month](#) | [Visitors each Year](#)


| Month | Total Visitors | Visitors per Day | Unique Visitors | Unique Ratio | Pages | Hits | BW |
|------------|----------------|------------------|-----------------|--------------|--------------|---------------|-------------|
| April 2013 | 30 | 1.0 | 27 | 90% | 41 | 51 | 315.8k |
| May 2013 | 345 | 11.1 | 262 | 76% | 1,796 | 17,481 | 651.2M |
| June 2013 | 523 | 17.4 | 402 | 77% | 1,399 | 18,900 | 553.2M |
| July 2013 | 1,042 | 41.7 | 873 | 84% | 2,233 | 32,099 | 779.8M |
| | 1,940 | | 1,564 | | 5,469 | 68,531 | 1.9G |

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web stats

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Statistics for savewatersantafe.com[■] in July 2013

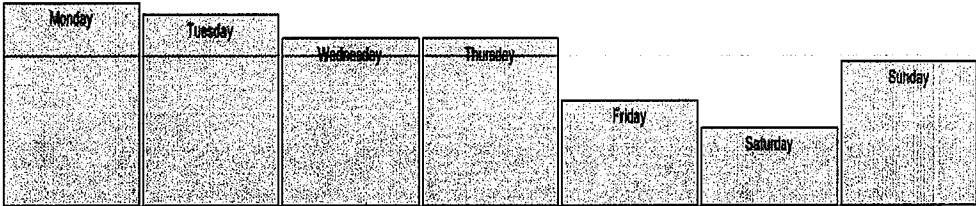
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Calendar of Hits this Month

[Overview](#) |
 [Calendar of Visitors](#) |
 [Calendar of Page Views](#) |
 [Calendar of Hits](#) |
 [Calendar of Bandwidth Usage](#)

| | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday | Week Total | Daily Average |
|--|-------------|-------------|-------------|-------------|-------------|-----------|-------------|------------------|---------------|
| Week: 27 | 1 1,956 | 2 1,596 | 3 1,385 | 4 924 | 5 636 | 6 740 | 7 1,516 | 8,753 | 1,250.4 |
| Week: 28 | 8 1,531 | 9 1,076 | 10 928 | 11 928 | 12 788 | 13 503 | 14 1,059 | 6,813 | 973.3 |
| Week: 29 | 15 1,411 | 16 1,762 | 17 1,442 | 18 1,443 | 19 1,185 | 20 676 | 21 970 | 8,889 | 1,269.9 |
| Week: 30 | 22 1,803 | 23 1,877 | 24 1,756 | 25 2,208 | 26 | 27 | 28 | 7,644 | 1,911.0 |
| Week: 31 | 29 | 30 | 31 | | | | | | |
|  | | | | | | | | | |
| Day of Week Total | 6,701 | 6,311 | 5,511 | 5,503 | 2,609 | 1,919 | 3,545 | Total: 32,099 | |
| Day of Week Average | 1,675.3 | 1,577.8 | 1,377.8 | 1,375.8 | 869.7 | 639.7 | 1,181.7 | Average: 1,284.0 | |


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 web stats

| # | Issue | Strategic Goal | Objectives | Tasks | Working Group Members | Reference Material | Fiscal Impact | Notes |
|----|--|--|--|---|--|---|---|--|
| 1. | Update Santa Fe Water Conservation and Drought Management Plan | | Assist in the 2015 Water Conservation Plan and create strategic framework and implement schedule | Read 2010 Plan and record suggested updates next meeting | Doug Pushard Grace Perez Lisa Randall Bill Roth Councilor Ives | City staff: Laurie Trevizo Caryn Grosse | Water Conservation programs and levy budget | Draft timeline created. Goal: Jan 2015 |
| 2. | Water Conservation Education/Outreach Program Including marketing ideas for voluntary water use | | | | Giselle Piburn Stephen Wiman Tim Michael Grace Perez Lise Knouse | | Costs associated with promoting outreach | |
| 3. | Evaluate/draft ordinances to promote outdoor water conservation | Reduce GPCD through selective use of ordinances | | 1.Research ordinances by other cities for effectiveness 2.Research current ordinances for possible improvements | Doug Pushard Bill Roth Councilor Ives Nancy Avedisian | | | <i>Request from D. Pushard to City Parks clarify Land Use Code 14-8.4 in E (4). Tree list also requested (pending land use approval)</i> |
| 4. | Reestablish Trend of Net Annual Reductions in Per Capita Water Usage | | | | Karyn Schmitt Melissa McDonald | | | |
| 5. | Proper Regulation of Water Usage and Waste Avoidance by Large Water Users | Contribute to annual water reductions in water use | Optimize water use by large water users | 1. Identify large water users 2.Estimate contribution to total demand 3.Identify ways to optimize water consumption 4.Engage in discussion | Tim Michael Melissa McDonald | Water Use in Santa Fe, Borchert, et al, July 2009 | Needs to be determined | Melissa will focus on Parks |

Water Conservation Plan Update

| | Task Name | Start Date | End Date | Duration | Predecessors | % Complete | Assigned To | At Risk | Comments |
|----|---|------------|----------|----------|--------------|------------|-------------------------------|---------|-------------------------------------|
| 1 | Strategic Planning | 10/01/12 | 12/30/14 | 587 | | 50% | | | |
| 2 | Create SmartSheet | 10/01/12 | 10/05/12 | 5 | | 100% | clgrosse@santafenm.gov | | |
| 3 | Check State Statute | 01/21/13 | 01/25/13 | 5 | | 95% | llrevizo@ci.santa-fe.nm.us | | |
| 4 | Check Clerks office re:quorem | 01/21/13 | 01/25/13 | 5 | | 95% | llrevizo@ci.santa-fe.nm.us | | |
| 5 | Climate Change Report | | | | | 95% | claudia borchert | | |
| 6 | Reclaimed Wastewater Report | | | | | 95% | claudia borchert | | |
| 7 | Stella Modeling | | | | | | rrcarpenter@ci.santa-fe.nm.us | | |
| 8 | Annual Water Reports- 2012 | | | | | 100% | Alan Hook | | |
| 9 | Demand Elasticity Report | | | | | | Jim Fryer | | |
| 10 | Residential End Use Study | | | | | | Aquacraft | | |
| 11 | Identify Updates to Plan | 01/17/13 | 12/13/13 | 237 | | 100% | Working Group | | |
| 12 | section 1: Overview | 01/17/13 | 02/14/13 | 21 | | 100% | Working Group | | update ordinances, meter size rates |
| 13 | section 2: Water Conservation Program | 02/15/13 | 06/21/13 | 91 | 12 | 100% | Working Group | | |
| 14 | section 3: Drought Management Plan | 07/12/13 | 08/09/13 | 21 | | 100% | Working Group | | |
| 15 | section 4: Regional Water Plan | 08/23/13 | 09/20/13 | 21 | | 100% | Working Group | | |
| 16 | section 5: Continued Improvements Plan | 10/04/13 | 11/01/13 | 21 | | 100% | Working Group | | |
| 17 | section 6: Conclusions | 11/15/13 | 12/13/13 | 21 | | 100% | Working Group | | Review completed 7-25-13 |
| 18 | Prepare Documents | 01/10/14 | 12/30/14 | 253 | | | Water Conservation Staff | | |
| 19 | Committee Process | | | | | | | | |
| 20 | Informational update to PUC/WCC | 03/05/14 | 04/01/14 | 20 | | | | | |
| 21 | Include 2013 Annual Report | 03/03/14 | 03/31/14 | 21 | | | | | |
| 22 | Revisions | 03/03/14 | 03/31/14 | 21 | | | | | |
| 23 | GPCD Calculator | 04/01/14 | 04/30/14 | 22 | | | | | |
| 24 | PUC | 05/01/14 | 05/30/14 | 22 | | | | | |
| 25 | Finance | 06/02/14 | 07/31/14 | 44 | | | | | |
| 26 | Info Item to Council | 08/01/14 | 09/30/14 | 43 | | | | | |
| 27 | Finalize Edits/Comments to Water Conservation Plan | 11/28/14 | 11/28/14 | 1 | | | | | |
| 28 | In House Deadline | 11/28/14 | 11/28/14 | 1 | | | | | |
| 29 | Approval | 12/01/14 | 12/19/14 | 15 | | | | | |
| 30 | Vote to Accept/Present to OSE | 12/01/14 | 12/19/14 | 15 | | | | | |
| 31 | Water Conservation Plan due to OSE | 10/01/12 | 01/15/15 | 599 | | | | | |

Notes from Education and Outreach Working Group Meeting

7/24/13

Present: Stephen, Giselle, Grace, Tim, Laurie, Rick

Goals of presentation and things to include:

- Educate audience on water issues (multiple sources, resource management, importance of conservation, climate change & adaptation)
- Answer to: why conserve at all?
- Update on the current conditions
- What can residents do? Tools for conservation
- Draw on past conservation successes to demonstrate that behavior makes a difference
- Conservation is cheaper than other water sources

Why conserve?

- To maintain our quality of life.
- NOT to increase development. In our ordinances, we've already established a link between new development and water. Most new developments have to provide their own water rights, which are banked.
- It's the right thing to do
- City will help with incentives, passing regs
- It's cheaper than other sources of water
- To enhance and preserve the reliability of our sources
- Social justice aspect – just because people have \$ to pay tons for water, it doesn't make it right. Conservation should be for everyone.

Have to acknowledge that lifestyles may be incompatible: golf courses vs. flowing river.

Visuals should be of this community to the extent possible.

Suggestion: create a slide showing projection of water use, with alternative futures, showing cost of BDD and saying “ready to pay \$221M” again this year? Conservation is cheapest!

BDD provides the City with 5230 ac-ft / year. City uses its full allocation.

BDD provides 1800 ac-ft for SFe county, which is not yet using its full allocation.

Take home message: conservation is the cheapest way to go.

City should lead by example, and sometimes doesn’t. Need to alter the perception that City not always doing its job.

Two avenues to attack City misconduct: go to elected officials or approach City Manager. Demand accountability from City staff/departments.

Water rights with new development, rebates get banked and developers and affordable housing can tap into that; no new net demand on system; should be on FAQ paper.

Presentation should explain why is conjunctive use good and avoid using the technical name.

We should develop a list of organizations that could serve as “ready-made” audience. We could test the presentation on a few prior to going more public.

City water staff can help WCC by:

- Plugging presentation at talks they give to different organizations
- Putting out press releases – but only so many chances, so have to decide what’s important
- Promoting scheduled presentations on radio show (Que Suave)
- Buying ad space, if funds can be allocated

The City currently has collaborative efforts with private vendors. As long as every vendor in City is given the opportunity to participate, there is no conflict.

It's important for WCC to respect lead times when staff action is requested. Good planning is essential prior to requests to Laurie.

WCC could take Laurie's vendor lists and let volunteers call them. They would self-select to give away incentives to attendees.

City has rooms available for public presentations. Need to schedule well in advance.

After the test presentations mentioned earlier, it's important to continue using "ready-made" groups: Lions' Club, Rotary, Kiwanis, home builders, botanical, watershed assoc., etc. Attendance is likely to be higher with these groups than with a general audience.

As incentives, City has some hose nozzles. This is a lot less work than administering rebates (quantifiable water savings needed for rebates, to go to water bank).

In response to point about what Albuquerque has done, that city targeted outdoor water use and its GIS department looked at landscapes to come up with quantifiable water savings.

Highest water demand peak on record = 19mgd. This included a system line break, which could have been 3 mg of loss.

Getting back to need for conservation: We're seeing things we haven't seen before: fires, 3rd year of drought, hotter high temps, less snow. There is also the potential for failure or reduction of faraway sources. Water supply is subject to "a ton" of variables.

Though calling for San Juan–Chama water at some point in the near future there may not be a native flow. Water takes 2 days to get here

from Heron Lake. Typically, there is 2% carriage loss from there to Santa Fe. Under extreme conditions like now, reality is 20-30% loss. There's a lack of carryover water in reservoirs (like Heron) from previous years.

2002 was only time there was a comparable situation with respect to SJ-C water. [Note: I think that's what I heard. Would appreciate corroboration from someone else.]

When discussing Orange and Red conservation levels, we need to address what does that mean for me? (i.e., for each member of the audience. i.e., businesses and residential

The City Manager has the leeway to override the water demand percentages and declare going to Orange level due to "extreme drought." As has been pointed out, the percentages cannot be reached under normal operations. This would happen if a facility is not available for some reason.

Election next March. The City Manager is interim until then.

Next steps:

We decided to work from Laurie's presentation (the "Presentation Lite") and insert more detailed slides as needed from existing Stephen/Doug presentation.

Laurie will send vendor lists to group.

Tim will create a "Why Conserve?" slide. Send ideas to him.

Stephen will focus on a couple of slides, including projections of future water use.

July 9, 2013

Working Group #5

- Discussed large water user info gathered by Tim Michael—Tim to present next meeting
- Meeting this week with Ben Gurule, of Parks and Recreation to discuss water conservation measures at city parks and to define tasks.
- Met with Laurie Trevizo to discuss additions to QWEL class. Adding passive water components.
- Melissa & Grace met to discuss WAA summary notes for group report
- Grace and Melissa met with Laurie to debrief the WAA conference and to discuss her level of interest in being involved. We also began working on WAA Water Conservation Boards Networking Group.
- Please add to our reference material list: ***Aquifer Protection Region 6 New Mexico, Water Conservation Landscaping and Waste Ordinance in the City of Albuquerque & Storm Water as a Resource***. Called Land Use to find out who has digital copy of Storm Water as a resource, to date have not received call back. Laurie has extra copies at the water conservation office.
- And <http://austintexas.gov/departments/water-conservation> looking specifically on landscape conversion rebate \$25 per \$100 sq. ft. up to \$1250
- <http://cms3.tucsonaz.gov/water/watersmartclasses>
- <http://www.ag.arizona.edu/pima/smartscape/smartscape/>

Submitted by Melissa McDonald & Tim Michael

Appendix 3: City of Flagstaff Landscape Plant List

Sections:

| | |
|-------|--|
| 3.010 | Purpose |
| 3.020 | Organization of the Landscape Plant List |
| 3.030 | City of Flagstaff Landscape Plant List |

3.010 Purpose

The City of Flagstaff Landscape Plant List is a compilation of recommended landscape plant types that are well-suited for survival and sustainable application in Flagstaff's unique climate and soil conditions. Plant types were selected based upon the research and recommendations of local landscape architects, landscape professionals and concerned citizens. This list is intended as a guide for the landscape requirements of Division 10-50.60 (Landscaping Standards) of the Zoning Code, and is not intended to be an all-inclusive list of acceptable landscape plants.

3.020 Organization of the Landscape Plant List

- A. The plants contained in this appendix are divided into eight separate categories, as follows, and are intended to meet a variety of landscaping needs and circumstances.
1. Trees (Deciduous);
 2. Trees (Evergreen);
 3. Shrubs (Deciduous);
 4. Shrubs (Evergreen);
 5. Groundcovers;
 6. Vines;
 7. Grasses; and
 8. Perennials.
- B. Within each category, the plants are arranged alphabetically by botanical name, with the common name listed in the adjacent right column.

C. The following supplemental information is also provided in the table for each plant type:

1. **Native or Naturalized**

This indicates whether the plant is native to the Flagstaff region, or if it has been naturalized to the local environment.

2. **Overstory or Understory (trees only)**

a. Overstory trees are deciduous or evergreen trees that are generally in excess of 12 feet in height, under which other understory trees and shrubs may be planted.

b. Understory trees may be either deciduous or evergreen, and grow under taller, overstory trees. These trees are usually no more than 10 to 12 feet in height, and therefore may be appropriate for planting under overhead power lines. Understory trees add structure, texture, color and multi-season interest to a landscape design.

3. **Sun Requirements**

The sun requirements of each plant are indicated as follows, and are intended to assist in the proper placement of plant types in relation to the sun.

a. S = Full sun;

b. PS = Partial shade; and

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4. **Water Needs**

The water needs of each plant are indicated as follows, and are intended to assist in the proper placement of plant types according to water consumption and therefore their placement in different landscape zones.

a. L = Low;

b. M = Medium; and,

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5. **Spacing**

Spacing information is provided for those plants which require a minimum separation in order to achieve greatest success.

6. **Special Characteristics**

Special characteristics include supplemental information specific to each

plant type, such as growth rate, leaf color, shape, and ideal environment for planting.

7. **Notes / Comments**

Notes and comments provide additional plant information, such as root characteristics, preferred soil types and maintenance needs.

8. **Parkways and Medians**

These columns identify those plants that have been pre-approved by the City Parks Division for placement in parkways and medians based on their size at maturity and maintenance requirements.

9. **Approved for R-O-W**

This column identifies those plants that have been pre-approved by the City Parks Division for placement in City rights-of-way based on their size at maturity and maintenance requirements.

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Appendix 3: City of Flagstaff Landscape Plant List

Sections:

| | |
|-------|--|
| 3.010 | Purpose |
| 3.020 | Organization of the Landscape Plant List |
| 3.030 | City of Flagstaff Landscape Plant List |

3.010 Purpose

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Section 3.030: City of Flagstaff Landscape Plant List

| Botanical Name | Common Name | Native? (Y/Nat.) | Over- story Tree | Under- story Tree | Sun Req. | Water Needs | Spacing | Special Characteristics | Notes / Comments | Parkways & Medians | | | | | |
|---|--------------------------------------|---------------------|---------------------|----------------------|-------------|-------------|----------|--|---|--------------------|-----------|------------|----------|--------------------|--|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | Approved for R.O-W | |
| Trees (Deciduous) | | | | | | | | | | | | | | | |
| <i>Acer ginnala</i> | Amur Maple | Nat. | | X | S/PS | M | 20 - 25' | Multi-trunked, shrubby, red fall color. Attractive cluster of small yellow fragrant flowers in spring. | Good substitute for oak. Slow growing, prune when young to ensure single trunk. Best in cool partially shaded area. | Y | Y | Y | Y | Y | |
| <i>Acer glabrum</i> | Rocky Mountain Maple | Y | X | | S/PS | M | | Native riparian, slow growing. Good fall color. Grows well in canyons and washes. | Requires well-drained soil. | N | N | N | N | N | |
| <i>Acer grandidentatum</i> | Bigtooth Maple | Y | X | | S | M | | Native riparian, slow growing. Yellow, orange and red fall color. | Requires well-drained deep soil. | N | N | N | N | N | |
| <i>Acer x freemanii</i> | Freeman Maple | Nat. | X | | S | M | 20 - 25' | A fast growing maple know for its attractive brilliant red fall color. | Naturally occurring hybrid between Silver Maple (A. Saccharinum) and Red Maple (A. Rubrum). | Y | Y | Y | Y | Y | |
| <i>Betula occidentalis</i> | River Birch | Nat. | | X | PS | H | | Grows well along streams. Has rich auburn bark. | Turns yellow in fall. Good for stream restoration. | N | N | N | N | N | |
| <i>Celtis occidentalis</i> | Common Hackberry | Nat. | X | | PS | L | | Bright green leaves, rounded crown, spreading roots. | Deep roots, good tree near sidewalk. No heaving. Very adaptable. | N | N | N | N | N | |
| <i>Celtis reticulata</i> | Western Hackberry, Netleaf Hackberry | Y | X | | PS | L | | Pendulous branches. Ornamental tree. | Deep roots, good tree near sidewalk. No heaving. Very adaptable. | N | N | N | N | N | |
| <i>Cercis canadensis</i> | American Redbud | | X | | S | M | | Leaves rich green color, rosy pink blossoms. | Will take tree form. Needs protection from wind. High risk for health survival. | N | N | N | N | N | |
| <i>Cercis occidentalis</i> | Western Redbud | | | X | PS | M | 20 - 25' | Beautiful, delicate magenta flowers. Fruit is edible, attractive to wildlife. | Very drought tolerant. Some summer water for faster growth. | Y | Y | Y | Y | Y | |
| <i>Crataegus species</i> | Hawthorn | Nat. | | X | S | M | | Flowering and fruit. Some have thorny branches. | Winter hardy. | N | N | N | N | N | |
| <i>Crataegus oxyacantha</i> <i>Var. Momogyna</i> | English Hawthorn | Nat. | | X | S | M | 20 - 25' | Great wildlife tree with beautiful spring and fall colors in some cultivars. | Pruning required to thin out excess twig growth. Most cultivators have thorns. | Y | Y | Y | Y | Y | |
| <i>Fraxinus americana</i> | Autumn Purple / White Ash | Nat. | X | | S | M | | Native to eastern US, very hardy. Not for windy areas. | Turns purple in fall. Good shade tree. | N | N | N | N | N | |
| <i>Fraxinus pennsylvanica</i> | Mashall Ash, Green Ash, Patmore Ash | Nat. | X | | S/PS/S H | M | 20 - 25' | Bright green leaves, attractive shape, fast growing. | Will tolerate extreme hot/ cold. Good street trees because of form. High risk. Seedless varieties. | Y | Y | Y | Y | Y | |
| <i>Fraxinus velutina</i> | Arizona Ash | Y | X | | PS | H | | Grows well along streams. Restorative Riparian shade tree. | Yellow leaves in fall. | N | N | N | N | N | |
| <i>Gleditsia triacanthos inermis</i> | Thornless Honeylocust | Nat. | X | | S | L | 20 - 25' | Very hardy plant. Spreading, arching branches. Leafs out late and goes dormant early. | Roots on old plants will heave paving. Not good around sidewalks. Requires deep watering. | Y | Y | Y | Y | Y | |
| <i>Juglans major</i> | Arizona Walnut | Y | X | | S | M | | Slow growing tree that typically has a split trunk. Produces nuts that mature in fall. | Toxic to nearby plants. | N | N | N | N | N | |

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Section 3.030: City of Flagstaff Landscape Plant List

| Botanical Name | Common Name | Native? (Y/Nat.) | Over- story Tree | Under- story Tree | Sun Req. | Water Needs | Spacing | Special Characteristics | Notes / Comments | Parkways & Medians | | | | | Approved for R.O.W |
|--------------------------------------|---|---------------------|------------------------|-------------------------|----------|----------------|----------|--|--|--------------------|-----------|------------|----------|---|-----------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | | |
| <i>Malus species</i> | Flowering Crabapple | Nat. | | X | S/PS/SH | M | 25 - 30' | Very hardy plant. Tolerant of many soil conditions. Blossom pink and red. Several varieties available. | Plant near fences they will heighten screening effect. Good espaliers. | Y | Y | Y | Y | Y | |
| <i>Plantanus wightii</i> | Arizona Sycamore | Y | X | | S | H | | Native plant. Yellow color leaves in fall. | | N | N | N | N | N | |
| <i>Platanus x acerifolia</i> | London Planetree | Nat. | X | | S | M | 25 - 30' | A good street tree which refoliates after a late frost. | Fast growing but prefers rich moist soils. | N | N | N | Y | Y | |
| <i>Populus acuminata</i> | Lanceleaf Cottonwood | Nat. | X | | S | H | | Grows well along streams. | Leaves turn yellow in fall. | N | N | N | N | N | |
| <i>Populus alba</i> | White Poplar | Nat. | X | | S | M | | Fast growing, narrow, columnar form. Leaves green on top, silvery below. | Invasive roots, short lived, can sucker. | N | N | N | N | N | |
| <i>Populus angustifolia</i> | Narrowleaf Cottonwood | Nat. | X | | S | M | | Native fast growing, drought tolerant. Once established, low maintenance. | Roots are invasive. Not for use near water sewer lines, septic tanks or streets. Use inter- mountain growth varieties. | N | N | N | N | N | |
| <i>Populus deltoides</i> | Eastern Cottonwood | Nat. | X | | S | M | | Fast growing. Grows best in sands or silts. | Requires moist, well drained soils. | N | N | N | N | N | |
| <i>Populus fremontii</i> | Fremont Cottonwood | Nat. | X | | S | M | | Native oval leaves. Golden fall color. | Invasive roots. Use inter- mountain growth varieties. | N | N | N | N | N | |
| <i>Populus nigra "italica"</i> | Lombardy Poplar | Nat. | X | | S | M | | Columnar tree. Bright green leaves. Good fall color. Fast growing. | Invasive roots. Good wind break. Short lived. Can sucker. | N | N | N | N | N | |
| <i>Populus tremuloides</i> | Quaking Aspen | Y | X | | S/PS | H | 30 - 35' | Native. Bright green leaves. White bark, fast growing. Yellow color in fall. | Invasive roots. | N | N | N | Y | Y | |
| <i>Prunus americana</i> | American Plum | Nat. | | X | S/PS | M | | Thicket forming shrub or small tree. | Eastern native with white flowers in spring. | N | N | N | N | N | |
| <i>Prunus cerasifera "krauter"</i> | Purpleleaf Plum | Nat. | | X | S | H | | Fruitless and not for windy locations. | Flowers are white in spring and has purple foliage. | N | N | N | N | N | |
| <i>Prunus cerasifera</i> | Flowering Pear | Nat. | | X | S | M | 25 - 30' | Adaptive. Attractive form, spring time flower display. | Medium sized. Sporadic flowering tree. Several adaptable varieties. | N | N | N | Y | Y | |
| <i>Prunus padus</i> | Bird Cherry, Mayday Tree | Nat. | | X | S | M | 25 - 30' | Small star-shaped fragrant white flowers in slender, drooping, 3-6' clusters. | Fast growing. Susceptible to tent caterpillar. Fruit loved by birds. | Y | Y | Y | Y | Y | |
| <i>Prunus sargentii</i> | Flowering Cherry | Nat. | | X | S | M | 25 - 30' | Pink or white spring flowers. Upright, spreading branches form rounded crown. | Little or no pruning. Sporadic flowering. | N | N | N | Y | Y | |
| <i>Prunus virginiana</i> | Chokecherry | Y | | X | PS | M | 20 - 25' | Red bark, white flowers. Good fall colors. | Medium sized, sporadic flowering tree. | N | N | N | Y | Y | |
| <i>Pryus calleryana varieties</i> | Flowering Pear, varieties Bradford, Chanticlear | Nat. | | X | S | M | 20 - 25' | Need maintenance. Upsweeping branches, flowering clusters. | Shade tree. Street tree. | Y | Y | Y | Y | Y | |
| <i>Quercus macorcarpa</i> | Bur Oak | Nat. | X | | S/PS | M | | Fast growing, glossy green, white leaves. | Rugged looking, adaptable. | N | N | N | N | N | |
| <i>Quercus gambelii</i> | Gambel Oak | Y | | X | S/PS | L | 25 - 30' | Slow growing, dark green leaves. Not suitable as a street tree. | Under ground creeping root system. Irregular form. Not available commercially in larger size or quantity. | N | N | N | Y | Y | |
| <i>Quercus borealis</i> | Red Oak | Nat. | X | | S/PS | M | 25 - 30' | Fast growing, large open-growing branches. Good fall color. | Adaptable to sunny slope areas. Deep roots. | N | N | N | Y | Y | |
| <i>Robinia ambigua "purple robe"</i> | Purple Robe Locust | Nat. | X | | S/PS | L | | Large shade tree for dry windy locations. Prone to scale and borers. | Fast growing with purple flowers that turn yellow in the fall. | N | N | N | Y | Y | |

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|------------------------------|------------------------------|---------------------|------------------------|-------------------------|----------|----------------|----------|---|--|--------------------|-----------|------------|----------|--|-----------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | | |
| <i>Robinia neomexicana</i> | New Mexican Locust | Y | | X | S | M | | A rapid growing tree that is very reminiscent of a large bush. | Has pink clustering flowers. Very attractive in bloom. Heavily thorned; not good in narrow areas. | N | N | N | N | | Y |
| <i>Robinia pseudoacacia</i> | Black Locust | Nat. | X | | S/PS | L | 20 - 25' | Very hardy tree. Showy, fragrant spring flowers. Good shade tree. Fast growing. Mossy seed pods. Prone to scale and borers. | Thorny weak branches. Difficult to prune. Suckers freely. Not good in narrow areas. | N | N | N | Y | | Y |
| <i>Sorbus aucuparia</i> | European Mountain Ash | Nat. | X | | PS | M | 25 - 30' | Mountain Ash provide habitat and forage for wildlife. Foliage turns red, orange, or yellow in fall. | Berries can be messy and are poisonous if consumed raw before the first hard frost. | N | N | N | Y | | Y |
| <i>Tilia</i> | Linden | Nat. | X | | S/PS | M | 20 - 30' | Straight trunk. Dense, compact crown. Fragrant yellow flowers. Slow growing. | Young trees require staking and shaking. Pretty shape. Prefers rich, moist soils. | Y | Y | Y | Y | | Y |
| Trees (Evergreen) | | | | | | | | | | | | | | | |
| <i>Abies concolor</i> | White Fir | Y | X | | S | M | 30 - 35' | Slow growing. Blue green needles, conical shape. | Needs well drained soil. Not salt tolerant. | N | N | N | N | | N |
| <i>Cedrus atlantica</i> | Atlas Cedar | Nat. | X | | S/PS | L | | Slow growing. Blue-green needles, open, graceful growth. Pyramidal shape. | Plant in protected area. Spreading. Needs 30' circle. Low survival rate in unprotected areas. | N | N | N | N | | N |
| <i>Juniperus deppeana</i> | Alligator Juniper | Y | X | | S | L | 25 - 30' | Striking checked pattern bark resembling alligator hide. Hard to find commercially. | Slow growing evergreen, very tolerant of drought. Male flowers produce large amounts of pollen that may affect those with allergies or asthma. | N | N | N | Y | | Y |
| <i>Juniperus monosperma</i> | One-Seed Juniper | Y | X | | S | M | 25 - 30' | Shrubby form with grey, fibrous and shredding bark. Great for dry windy sites. Hard to find commercially. | Slow growing evergreen, very tolerant of drought. Male flowers produce large amounts of pollen that may affect those with allergies or asthma. | N | N | N | Y | | Y |
| <i>Juniperus osteosperma</i> | Utah Juniper | Y | | X | S | L | 25 - 30' | Shrubby form with grey, fibrous and shredding bark. Great for dry windy sites. | Slow growing evergreen, very tolerant of drought. Male flowers produce large amounts of pollen that may affect those with allergies or asthma. | N | N | N | Y | | Y |
| <i>Juniperus scopulorum</i> | Rocky Mountain Juniper | Y | | X | PS | L | 25 - 30' | Pyramidal to oval crown, thin shedding bark, great for dry windy sties. | Slow growing evergreen, very tolerant of drought. Male flowers produce large amounts of pollen that may affect those with allergies or asthma. | N | N | N | Y | | Y |
| <i>Picea abies</i> | Norway Spruce | Nat. | X | | S/PS | M | | Fast growing (for a spruce) extremely hardy and wind resistant. Stiff, deep green, pyramid shape | Good tree for windbreaks and screening. | N | N | N | N | | N |
| <i>Picea pungens</i> | Colorado Spruce, Blue Spruce | Nat. | X | | S/PS | M | 30 - 35' | Slow growing. Conical shape. Native. | Blue or green needle varieties. | N | N | N | Y | | Y |
| <i>Pinus aristata</i> | Bristlecone Pine | Y | | X | S/PS | L | | Slow growing, attractive short, blue-green needles. Native. | May prefer northern exposure. | N | N | N | N | | N |

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| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | | |
| <i>Pinus edulis</i> | Pinyon Pine | Y | | X | S | L | | Slow growing, bushy form, edible nuts. Hardy tree. | Transplants easiest as young plants. Susceptible to insects when stressed. Hard to find nursery grown. | N | N | N | N | N | |
| <i>Pinus flexilis, strobiformis</i> | Limber Pine, Border Pine | Nat. | X | | S/PS | L | 30 - 35' | Slow growing. Native. Gray color bark. Slightly curved or twisted, dark green needles. | Grows well on dry, rocky slopes. | N | N | N | Y | Y | |
| <i>Pinus nigra</i> | Austrian Pine | Nat. | X | | S/PS | L | 30 - 35' | Dense pyramidal form. Very hardy dark green needles. Moderate growth rate. Good tree for specimen of mass planting. | Good substitute for Ponderosa Pine. Adaptable. | N | N | N | Y | Y | |
| <i>Pinus ponderosa</i> | Ponderosa Pine | Y | X | | S/PS/S H | L | 30 - 35' | Dark green needles. Stout, spreading branches. Large spire-like crown. | Does not transplant well from field. Container stock recommended. Susceptible to insects when stressed. | N | N | N | Y | Y | |
| <i>Pinus sylvestris</i> | Scotch Pine | Nat. | X | | S | L | 30 - 35' | Very hardy, wind resistant tree. Blue- green needles, irregular and picturesque when mature. Moderate growth rate. | Popular for its Christmas tree shape. | N | N | N | Y | Y | |
| <i>Pseudotsuga menziesii</i> | Rocky Mountain Douglas Fir | Y | X | | S/PS | L | | Soft, dark green or bluish-green needles. Good specimen tree. Not salt tolerant. | Tolerates most soil conditions. Plant in sunny open location. Use inter-mountain growth varieties. | N | N | N | N | N | |
| Shrubs (Deciduous) | | | | | | | | | | | | | | | |
| <i>Agave parryi</i> | Parry's Agave | Y | | | S | L | | Dry, rocky slopes, 4,500 - 8,000 ft. Flowers after approx. 25 years. Up to 18' flower stalks. | Blooms yellow from June - July. | N | N | N | N | N | |
| <i>Amelanchier alnifolia</i> | Saskatoon Serviceberry | Y | | | PS | M | 3 - 10' | Flower are white with 1' long strap like petals. Small apple like fruit that is showy and edible. | Produces suckers. Attracts wildlife. Good fall color. | Y | Y | Y | Y | Y | |
| <i>Amelanchier canadensis</i> | Canadian Serviceberry | Nat. | | | S/PS | L | 3 - 10' | Narrow upright form . Early white flowers. Yellow, red fall color. | Plant in sunny location. | Y | Y | Y | Y | Y | |
| <i>Amelanchier utahensis</i> | Utah Serviceberry | Y | | | S/PS | L | | Rocky slopes in pinyon/ juniper & ponderosa woodlands, 2,000 - 7,500 ft. | Blooms white from April - May. Drought tolerant. | N | N | N | N | N | |
| <i>Amorpha fruticosa</i> | False Indigo | Y | | | PS | M | 3 - 6' | Beautiful dark purple spikes. Individual spikes may contain 50 100 flowers. | Native to prairies of Minnesota. Drought tolerant, long-lived. | Y | Y | Y | Y | Y | |
| <i>Arctostaphylos species</i> | Manzanita | Y | | | PS | M | 3 - 8' | Branches with red to purple bark. Urn-shape white or pink flowers. | Palatable to animals. Certain species attract humming birds. | Y | Y | Y | Y | Y | |
| <i>Aronia melanocarpa</i> | Black Chokeberry | Y | | | S/PS | L | | Tolerant of cold, heat, wind, dry and damp soils. White flowers in spring followed by black berries and red leaves in fall. | Very ornamental plant. Grows well under trees. | N | N | N | N | N | |
| <i>Artemisia frigida</i> | Fringed Sage | Y | | | S | L | | Dry, rocky soils, 5,500- 8,000 ft in semi-evergreen, long lived, and drought tolerant. | | N | N | N | N | N | |

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|-----------------------------------|-------------------------------------|------------------|-----------------|------------------|----------|-------------|---------|---|--|--------------------|-----------|------------|----------|--------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | |
| <i>Artemisia ludoviciana</i> | Prairie Sage | Y | | | S/PS | L | | Native habitat is in plains, woodlands clearings, and rock gardens. | | N | N | N | N | N |
| <i>Artemisia tridentata</i> | Basin Big Sagebrush | Y | | | S | L | | Dry plains, mesas, 5,000 - 8,000 ft. semi-evergreen, drought tolerant, and several subspecies. | | N | N | N | N | N |
| <i>Atriplex canescens</i> | Four-Wing Saltbrush | Y | | | S | L | | Wide range, sandy soils, 2,000 - 8,000 ft. | Saline tolerant, erosion control, and important to wildlife. | N | N | N | N | N |
| <i>Barberis thunbergii</i> | Japanese Barberry | N | | | S/PS | L | | Hardy, graceful growth habit with slender, arching, spiny branches. Green foliage with red berries. | Clip or train into hedge or shrub. | N | N | N | N | N |
| <i>Barberis species</i> | Barberry | Y | | | PS | M | 3 - 8' | Yellow flowers bloom in April and June. Flowers turn into edible berries. | Branches are thorny. Has great resprouting ability. Not for use near pedestrians. | Y | Y | Y | Y | Y |
| <i>Buddleia davidii</i> | Butterfly Bush, Summer Lilac | Nat. | | | S/PS | M | | Fast growing. Dark green and white leaves, lilac and orange flower clusters. | Hardy. Needs well- drained soil. Cut back in spring. Susceptible to spider mites. | N | N | N | N | N |
| <i>Caragana aborescens</i> | Siberian Peashrub | Y | | | S/PS | L | | Multi-stemmed hedge or single-stemmed small tree. Yellow, fragrant flowers. | Hardy, fast growing. Prune for hedge with thorns. Good for windbreak. Dwarf species available. | N | N | N | N | N |
| <i>Caragana species</i> | Mountain Mohogany | Y | | | S/PS | L | 3 - 12' | Leaves green on top, and silver underneath. Open branching pattern. | Native. Prune to thicken. | Y | Y | Y | Y | Y |
| <i>Caryopteris x clandonensis</i> | Blue Mist Spirea, Bluebeard | Nat. | | | S/PS | M | | Blue flowers in late summer. Can handle drought. Native to western US. | Might die back completely in winter but will come back in spring. | N | N | N | N | N |
| <i>Cercocarpus montanus</i> | Curl-leaf Mountain Mahogany | Y | | | S/PS | L | | Narrow curled leaves. Slow growing in coldest areas. | Extremely drought tolerant. Native to western US. | N | N | N | N | N |
| <i>Cercocarpus species</i> | Mountain Mahogany | Y | | | PS | M | 3 - 12' | Flowers without petals but distinctive sepals with pinkish to reddish petal like lobes. | Wildlife attractive in fall and winter because conspicuous fruits. Drought tolerant. | Y | Y | Y | Y | Y |
| <i>Chaenomeles species</i> | Flowering Quince | Nat. | | | S | M | 3 - 4' | Variety in form and height. White, pink or red flowers. | Tolerates temp. extremes. Train as hedge or buffer. | N | N | N | N | N |
| <i>Chamaebatiaria millefolium</i> | Fernbush | Y | | | S | L | 3 - 4' | Leaves look like tiny ferns but plant unrelated to ferns. | Wildlife friendly. Loved by deer and elk. Salt tolerant. | Y | Y | Y | Y | Y |
| <i>Cornus alba</i> | Siberian Dogwood | Nat. | | | S/PS | M | | Bright red twigs and small white flowers in spring. New shoots have the brightest color. | Grows quickly. | N | N | N | N | N |
| <i>Cornus stolonifera</i> | Red-Osier Dogwood, Red Twig Dogwood | Nat. | | | S/PS | H | 3 - 12' | Red twigs contrast with green leaves, white flowers. | Native. Yellow twig and variegated leaved varieties available. | Y | Y | Y | Y | Y |
| <i>Cotoneaster acutifolia</i> | Peking Cotoneaster | Nat. | | | S/PS | L | | Glossy green when mature. Useful as hedge or screen. | Black fruit. Red foliage in fall. | N | N | N | N | N |
| <i>Cotoneaster apiculatus</i> | Cranberry Cotoneaster | Nat. | | | S/PS | L | 3 - 9' | Spreading growth habit. Roundish shiny leaves. Bright green, red fall color, red fruit in clusters. | Good for slope cover. Ground cover. | Y | Y | Y | Y | Y |

Native?: Y = Native; Nat. = Naturalized

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Section 3.030: City of Flagstaff Landscape Plant List

| Botanical Name | Common Name | Native? (Y/Nat.) | Over-story Tree | Under-story Tree | Sun Req. | Water Needs | Spacing | Special Characteristics | Notes / Comments | Parkways & Medians | | | | | Approved for R.O.W |
|------------------------------------|-------------------------------|------------------|-----------------|------------------|----------|-------------|---------|---|--|--------------------|-----------|------------|----------|---|--------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | | |
| <i>Cotoneaster divaricata</i> | Spreading Cotoneaster | Nat. | | | S/PS | M | 4 - 9' | Stiff branches spread from center of shrub. Dark green leaves, pale beneath, red berries | Good for slope cover. | Y | Y | Y | Y | Y | |
| <i>Euonymus alata</i> | Winged Euonymus, Burning Bush | Nat. | | | S/PS | M | | Wide growth pattern, flat-topped appearance. Dark green leaves, red in fall, orange-red fruit. | Use as background or screening plant. Compact variety available. | N | N | N | N | N | |
| <i>Euonymus alata "compacta"</i> | Dwarf Burning Bush | Nat. | | | S/PS | M | | Dense shrub about 3' wide. | Brilliant red in fall. | N | N | N | N | N | |
| <i>Forestiera neomexicana</i> | New Mexican Olive | Y | | | S | L | | Grows well on hillsides, mesas, and river valleys | Blooms yellow in fall | N | N | N | N | N | |
| <i>Forsythia suspensa</i> | Forsythia | Nat. | | | S | M | | Early bloomer with yellow flowers. Need pruning. | Tolerates most soils. Dwarf varieties available. | N | N | N | N | N | |
| <i>Gutierrezia sarothrae</i> | Snakeweed | Y | | | S | L | 3 - 5' | Small golden yellow flowers that bloom in the fall. | Purple veined leaves. | Y | Y | Y | Y | Y | |
| <i>Hibiscus syriacus</i> | Rose-of-Sharon | Nat. | | | S | M | | Fast growing. Resembles a bush full of holly flowers in late summer. Needs winter protection for the first few years. | Prune for larger blossoms. | N | N | N | N | N | |
| <i>Holodiscus dumosus</i> | Rock Spire, Mountain Spray | Y | | | S | L | 4 - 6' | Attracts bees, butterflies, and birds. Has pink blooms in spring. | Drought tolerant. Good plant for xeriscaping. | N | N | N | N | N | |
| <i>Kerria japonica plantitoria</i> | Japanese Kerria | Nat. | | | S/PS | M | | Open, graceful, round shrub. Bright green leaves, small yellow flowers. | Prime after flowering. Open graceful form. | N | N | N | N | N | |
| <i>Kniphofia amabilis</i> | Beauty Bush | Nat. | | | S | M | | Upright shrub, pink flowers. | Requires some pruning. Scraggly. Flowers. | N | N | N | N | N | |
| <i>Ligustrum aureum</i> | Golden Privet | Nat. | | | S/PS | M | | Yellow edged leaves. White spring flowers. Attracts bees. | Clip as hedge or stand alone. | N | N | N | N | N | |
| <i>Ligustrum vulgare</i> | Privet | Nat. | | | S/PS | M | | Fast growing shrub that can be clipped into formal shapes. | Small white flowers cluster in summer. | N | N | N | N | N | |
| <i>Lonicera involucrata</i> | Twinberry | Nat. | | | S/PS | M | | Flowers are orange-red and appear in March-July. With paired purple and black berries. Dark green foliage. | Native to most mountain areas of the Western US. | N | N | N | N | N | |
| <i>Lonicera korolkowii</i> | Red-Flowered Honeysuckle | Nat. | | | S/PS | M | | Many small rose color flowers in late spring. | Great background shrub. | N | N | N | N | N | |
| <i>Lonicera t. arnolds red</i> | Arnolds Red Honeysuckle | Nat. | | | S/PS | M | | Tolerant of harsh conditions. | Blooms red in summer. | N | N | N | N | N | |
| <i>Lonicera tatarica</i> | Tatarian Honeysuckle | Nat. | | | S/PS | M | | Snow white to pink flowers in late spring. Birds love the late red spring berries. | Undermining and disease resistant. | N | N | N | N | N | |
| <i>Lonicera utahensis</i> | Utah Honeysuckle | Nat. | | | PS | M | | Likes open coniferous forest. | Orange berries attract wildlife | N | N | N | N | N | |
| <i>Perovskia atriplicifolia</i> | Russian Sage | Nat. | | | S | M | 3 - 4' | Tubular lavender flowers on grayish white stems. Pungent odor when crushed. | Best in mass planting. Cut back to ground before growth. Drought tolerant. | Y | Y | Y | Y | Y | |
| <i>Philadelphus species</i> | Mock Orange | Nat. | | | S/PS | M | | Fountain form, white flowers. | Prune after blooming. | N | N | N | N | N | |
| <i>Physocarpus opulifolius</i> | Dwarf Ninebark | Nat. | | | S/PS | M | | Rust color in fall. Good shade shrub for Flagstaff. | Blooms white/ pink in spring. | N | N | N | N | N | |
| <i>Physocarpus species</i> | Ninebark | Y | | | S/PS | M | | Peeling bark, white flowers. | Hardy. | N | N | N | N | N | |

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Section 3.030: City of Flagstaff Landscape Plant List

| Botanical Name | Common Name | Native? (Y/Nat.) | Over- story Tree | Under- story Tree | Sun Req. | Water Needs | Spacing | Special Characteristics | Notes / Comments | Parkways & Medians | | | | | Approved for R-O-W |
|-------------------------------|------------------------------|---------------------|------------------------|-------------------------|----------|----------------|---------|---|--|--------------------|-----------|------------|----------|-----------------------|-----------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | Approved for R-O-W | |
| <i>Potentilla fruticosa</i> | Bush Cinquefoil | Y | | | S/PS | L | | Tolerant to most soil conditions. Bloom profuse yellow, white, yellow-orange. | Native. Hardy. Several species. | N | N | N | N | N | |
| <i>Potentilla fruticosa</i> | Potentilla | Nat. | | | S | M | 3 - 6' | Showy bright-golden yellow five petal flower. Brown shredded bark. | Suckers, difficult to prune. | Y | Y | Y | Y | Y | |
| <i>Prunus besseyi</i> | Western Sand Cherry | Y | | | S | M | 3 - 6' | Clusters of beautiful white flowers. Silver green leaves. Black berries. | Hardy plant. Birds feed on berries. Short lived. | Y | Y | Y | Y | Y | |
| <i>Prunus cistena</i> | Purple Leaf Sand Cherry | Nat. | | | S/PS | L | | Can be shaped into bush or small tree. Has white-pink flowers in spring. | Bears small black-purple fruit but hardly noticeable due to poor contrast to leaves. | N | N | N | N | N | |
| <i>Prunus tomentosa</i> | Nanking Cherry | Y | | | S/PS | L | | Hardy. Fruiting shrub. Edible scarlet fruit, dark green open foliage. White flowers. | Good fall color. | N | N | N | N | N | |
| <i>Prunus x cistena</i> | Dwarf Red-leaf Plum | Nat. | | | S | L/M | | Multi-branched shrub with purple leaves. Can be trained as a tree. | White - pink flower in early spring. | N | N | N | N | N | |
| <i>Purshia tridentata</i> | Antelope Bitterbrush | Y | | | S | L | | Rocky hillsides, slopes and mesas. | Important wildlife species. | N | N | N | N | N | |
| <i>Pyracantha fortuneana</i> | Cherri Berri Pyracantha | Nat. | | | S | L | | Extremely hardy. Clusters of orange berries in fall, eaten by birds. | Blooms in fall. | N | N | N | N | N | |
| <i>Rhamnus cathartica</i> | Common Buckthorn | Y | | | S/PS | L | | Bright green leaves, yellow in fall. Black fruit. Tall and narrow form. | Good wind break. | N | N | N | N | N | |
| <i>Rhus aromatica</i> | Fragrant Sumac | Nat. | | | PS | M | 3 - 8' | Flowers can be white or yellow. Attractive orange or red fall color. | Leaves fragrant when crushed. Often confused for poison-ivy. Short lived. | Y | Y | Y | Y | Y | |
| <i>Rhus glabra</i> | Smooth Sumac | Nat. | | | S/PS | L | 3 - 8' | Open growth pattern. Deep green leaves, whitish beneath, red fall color | Fast growing. Good for slopes. Invasive to foundations. | Y | Y | Y | Y | Y | |
| <i>Rhus ovata</i> | Surgar Sumac | Y | | | S | L | | Found on slopes and mesas | Xeric broadleaf. Usually assoc. with Manzanita. | N | N | N | N | N | |
| <i>Rhus trilobata</i> | Squaw Bush, Three Leaf Sumac | Nat. | | | S/PS | L | 4 - 8' | Clumpy growth habit. Good fall color. Good in dry, rocky soil. | Good as a low hedge. | Y | Y | Y | Y | Y | |
| <i>Rhus typhina</i> | Staghorn Sumac | Nat. | | | S/PS | L | 5 - 8' | Large with upright growth habit. Leaves deep green above, white blow. Decorative fruit. | Red fall color. Large shrub. | Y | Y | Y | Y | Y | |
| <i>Ribes alpinum</i> | Alpine Currant | Nat. | | | S/PS | L | | Has dense, twiggy growth. Inconspicuous flowers and fruit. Good fall color. | Flower and rock garden specimen/ accent shrubs. Can be pruned into hedge. | N | N | N | N | N | |
| <i>Ribes aureum</i> | Golden Currant | Y | | | S/PS | L | 3' | Erect growth, light green leaves. Cluster of small yellow, fragrant leaves. | Good fall color. Can be pruned into hedge. | Y | Y | Y | Y | Y | |
| <i>Ribes inebrians</i> | Wax Currant | Y | | | PS | L | 3 - 6' | Greenish-white to pinkish tubular flowers. Red or orange fruit. | Furry texture under leaves. Densely branched. | Y | Y | Y | Y | Y | |
| <i>Ribes rubrum</i> | Red Lake Currant | Nat. | | | S/PS | M | | Delicious edible currants. | Blooms pink in spring. | N | N | N | N | N | |
| <i>Rosa f. persian yellow</i> | Persian Yellow Rose | Nat. | | | S/PS | M | | Double, yellow blossoms. Prolific old fashion rose. | Blooms yellow in June. | N | N | N | N | N | |

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Section 3.030: City of Flagstaff Landscape Plant List

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|-------------------------------------|---------------------|---------------------|------------------------|-------------------------|----------|----------------|---------|--|---|--------------------|-----------|------------|----------|---|-----------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | | |
| <i>Rosa rugosa</i> | Shrub Rosa | Nat. | | | S | | | Very hardy, vigorous rose. Blooms in late spring in a range of color depending on cultivar. Showy red - orange to orange fall color. | Can tolerate dry, sandy soils and light shade. Bright red tomato shaped fruit. | N | N | N | N | N | |
| <i>Rosa woodsii</i> | Woods Rose | Y | | | S | L | | Sparse branching pattern. Single pink and white blossoms in spring and summer. Rose hips persist throughout the winter. | Native to western and central North America. | N | N | N | N | N | |
| <i>Salix exigua</i> | Coyote Willow | Y | | | S/PS | M | | Grows on slopes, woodland clearings and meadows. | Grows fast and helps stabilize soils. | N | N | N | N | N | |
| <i>Sambucus caerulea</i> | Blue Elderberry | Y | | | S/PS | M | | Has white flower clusters spring to summer. | Edible blue-black fruit for birds and humans. Native from California north to Canada and east to the Rockies. | N | N | N | N | N | |
| <i>Sambucus species Elderberry</i> | Blue Elderberry | Y | | | S/PS | L | | Creamy white flowers. Has black, blue or red fruit depending on species. | Fast growing. Golden Elder has yellow flowers most of the summer. Screening plant for three seasons. | N | N | N | N | N | |
| <i>Shepherdia argentea</i> | Russet Buffaloberry | Y | | | PS | M | | Grows well in coniferous forests. | Birds eat the berries, makes for a good hedge. | N | N | N | N | N | |
| <i>Spiraea species</i> | Spiraea | Nat. | | | S/PS | L | | Variety in form and height, and flowering season. White, pink or red flowers. | Hardy. Prune after blooming. Compact, spreading to tall graceful types available. | N | N | N | N | N | |
| <i>Symphoricarpos albus</i> | Snowberry | Nat. | | | S/PS | L | | Upright or spreading shrub. Small pink or white flowers in clusters. | Fruits best in full sun with white berry. | N | N | N | N | N | |
| <i>Symphoricarpos oreophilus</i> | Mountain Snowberry | Y | | | PS | M | | Native habitat is on wooded slopes and along streams. | Has white berries, blooms yellow in fall. | N | N | N | N | N | |
| <i>Syringa vulgaris</i> | Lilac | Nat. | | | PS | M/H | 6 - 15' | Dark green heart shaped leaf, cluster deeply fragrant purple flowers. | Hardy shrub, produces suckers. Flowers are inconsistent due to frost. | Y | Y | Y | Y | Y | |
| <i>Viburnum dentatum</i> | Arrowwood Viburnum | Nat. | | | S/PS | M | | Dark green and red in fall color. Birds like the fruits. | White flat clusters of flowers occur in June. | N | N | N | N | N | |
| <i>Viburnum opulus</i> | Cranberry Bush | Nat. | | | PS | H | 4 - 9' | Fragrant and attractive flowers. Stunning fall foliage. Blooms get frosted here. | Fruit appealing to birds and other wildlife (deer). Slow growing. Has shade tolerance. | Y | Y | Y | Y | Y | |
| <i>Viburnum x burkwoodii</i> | Burkwood Viburnum | Nat. | | | S/PS | | | Deciduous but often evergreen shrub with glossy green foliage. | Pink bud open white in early spring. Red fruit turns black in summer. | N | N | N | N | N | |
| <i>Viburnum x carlcephalum</i> | Fragrant Viburnum | Nat. | | | S/PS | M | | Low maintenance plant with pink or white flowers. | Foliage turns red/ purple in fall. | N | N | N | N | N | |
| Shrubs (Evergreen) | | | | | | | | | | | | | | | |
| <i>Berberis fremontii</i> | Fremont Barberry | Y | | | S | L | | Pinyon/ juniper, ponderosa woodlands, 4,000 - 7,000 ft. | Evergreen with a holly like leaf. | N | N | N | N | N | |
| <i>Buxus microphylla, "koreana"</i> | Korean Boxwood | Nat. | | | S/PS | M | | Low hedge or wall planting against house susceptible to winter burn. | Slow growing. Plant in protected location. | N | N | N | N | N | |
| <i>Chrysothamnus nauseosus</i> | Rubber Rabbit Brush | Y | | | S | L | 3 - 6' | Aromatic, gray- green foliage, yellow flowers in late summer. | Twiggy looking. Hardy. Drought tolerant. | Y | Y | Y | Y | Y | |

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|--------------------------------|---|---------------------|------------------------|-------------------------|-------------|----------------|---------|---|---|--------------------|-----------|------------|----------|---|-----------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | | |
| <i>Cotoneaster congestus</i> | Pyrenee Cotoneaster | Nat. | | | S/PS | M | | Dense, rounded form with branches curving downward. Dark green leaves, small red fruit. | Good on rocky slopes. Semi-evergreen to evergreen. | N | N | N | N | N | |
| <i>Cowania mexicana</i> | Cliffrose | Y | | | S | M | 3 - 9' | Shrub has many branches and somewhat straggly appearing. Small yellow rose-like flowers. | Native. Needs some pruning. Drought tolerant. | Y | Y | Y | Y | Y | |
| <i>Fallugia paradox</i> | Apache Plume | Y | | | S | L | 3 - 8' | Dark green leaves, in clusters. White rose-like flowers. | Native. Rugged looking. Drought tolerant. | Y | Y | Y | Y | Y | |
| <i>Juniperus chinensis</i> | Chinese Juniper | Nat. | | | S | L | | Flowers are yellow to orange-brown and come out in March. Can tolerate adverse conditions, except water logged soils. | Fall colors range from a creamy yellow to a blue green to grey green. | N | N | N | N | N | |
| <i>Juniperus sabina</i> | Tamarix Juniper | Nat. | | | S/PS | M | | 15' spread | | N | N | N | N | N | |
| <i>Juniperus species</i> | Juniper ('Arcadia', 'Blue Chip', 'Broadmoor', 'Buffalo', 'Scandia', ect.) | Nat. | | | S/PS | L | 3 - 15' | Many forms and color varieties. Easy to grow once established. | Fast growing. Hardy. Very popular. | Y | Y | Y | Y | Y | |
| <i>Juniperus squamata</i> | Blue Star Juniper | Nat. | | | S | M | | Drought tolerant. Doesn't like humidity and high night temperatures. | Low growing, dense shrub, with silvery-blue foliage. Low maintenance. | N | N | N | N | N | |
| <i>Juniperus x pfitzeriana</i> | Sea Green Juniper | Nat. | | | S/PS | M | | Broad arching limbs, 5' spread. | | N | N | N | N | N | |
| <i>Mahonia aquifolium</i> | Oregon Grape Holly | Nat. | | | S/PS/S H | M | 3 - 6' | Glossy, holly-like leaves. Blue berries. | Grows best against a wall as low hedge/screen. Good looking all year. | Y | Y | Y | Y | Y | |
| <i>Picea glauca "conica"</i> | Dwarf Alberta Spruce | Nat. | | | PS | M | | Compact and pyramidal tree. Short fine needles. Yellow/bright green in color, makes handsome tub plant. | Slow growing. Plant in protected location. Susceptible to winter burn. High risk. | N | N | N | N | N | |
| <i>Pinus mugo</i> | Mugo Pine | Nat. | | | S | L | | Variable sizes. From prostrate shrub to moderate size tree. Open growing, spreading. | Slow growing. | N | N | N | N | N | |
| <i>Pyracantha angustifolia</i> | Pyracantha, Narrowleaf Firethorn | Nat. | | | S/PS/S H | L | | Densely branched shrub. Glossy, green leaves, orange fruit, white flowers and thorns. | Fast growing. Not evergreen in harsh winters. Need pruning. Use as espalier on wall. | N | N | N | N | N | |
| <i>Yucca baccata</i> | Banana Yucca | Y | | | PS | L | | Native to dry hills and slopes. | Has flowering stalk that grows to 5'. | N | N | N | N | N | |
| <i>Yucca species</i> | Yucca | Y | | | S | L | | Many species have edible fruits. Has sword shaped leaves with spikes of white flowers. | Can only be pollinated by the Yucca Moth or by hand. Be sure to select a cold tolerant species. | N | N | N | N | N | |
| Groundcovers | | | | | | | | | | | | | | | |
| <i>Achillea lanulosa</i> | Western Yarrow | Y | | | S/PS | L | | Native habitat is in ponderosa woodlands, meadows, and between 5,500 and 11,500 ft. | White blooms from July - October. | N | N | N | N | N | |
| <i>Achillea tomentosa</i> | Wooly Yarrow | Y | | | S | M | 6 - 18" | Flat spreading mat of fern-like, deep green, hairy leaves, Golden flower heads top of 6 - 10" stems. | Good edging and a neat ground cover for small areas. Use in rock gardens. | Y | Y | Y | Y | Y | |

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|--------------------------------|--------------------------|------------------|-----------------|------------------|-------------|-------------|---------|---|--|--------------------|-----------|------------|----------|--------------------|--------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | Approved for R-O-W | |
| <i>Aegopodium podagraria</i> | Bishop's Weed | Nat. | | | S/PS | H | 6 - 18" | Light green, divided leaflets make a low dense mat. | Very vigorous ground cover, spreads by underground rootstocks. | Y | Y | Y | Y | Y | |
| <i>Agastache cana</i> | Hummingbird Mint | Y | | | S/PS | M | | Grows in dry mountain slopes (i.e. TX, NM, CO) | Has purple blooms in September and October. | N | N | N | N | N | |
| <i>Ajuga species</i> | Carpet Bugle | Nat. | | | S/PS/S H | L | 6 - 18" | Forms mat of dark green leaves. White, pink or blue flowers. | Fast growing. | Y | Y | Y | Y | Y | |
| <i>Antennaria parvifolia</i> | Rocky Mountain Pussytoes | Y | | | S/PS | L | | Native habitat is in ponderosa woodlands and meadows between 5,000 and 12,000 ft. | White blooms in May and June. | N | N | N | N | N | |
| <i>Antennaria rosea</i> | Pussytoes | Y | | | S/PS | M | 6 - 18" | Silvery green foliage with white cottony flowers. Good in rock gardens. | Native. Takes light foot traffic. Two species - one for sun, one for shade. | Y | Y | Y | Y | Y | |
| <i>Anthemis nobilis</i> | Chamomile | Y | | | S | L | | Evergreen. Forms mat of bright green leaves and daisy-like flowers. | Can be moved. | N | N | N | N | N | |
| <i>Aquilegia chrysantha</i> | Golden Columbine | Y | | | S/PS | M | | Grows in moist woodlands, aspen groves, and between 3,000 and 11,000 ft. | Yellow blooms from June - September | N | N | N | N | N | |
| <i>Aquilegia desertorum</i> | Red Columbine | Nat. | | | S/PS | M | | Grows in moist woodlands, canyon slopes and between 6,800 and 8,000 ft. | Has red blooms from June - September. | N | N | N | N | N | |
| <i>Arabis alpine</i> | Mountain Rockcress | Nat. | | | S | M | 6 - 18" | Low, tufted, rough haired plant, 2' wide, dense white flowers in clusters. | Have attractive year round foliage and clusters of flowers. Needs good drainage. | Y | Y | Y | Y | Y | |
| <i>Arabis caucasica</i> | Wall Rockcress | Nat. | | | S | M | 6 - 18" | Forms mats of gray-green leaves, white flowers, 11/2' wide, excellent ground covering for spring-flowering bulbs. | Have attractive year round foliage and clusters of flowers. Needs good drainage. | Y | Y | Y | Y | Y | |
| <i>Arctostaphylos uva-ursi</i> | Bearberry, Kinnickinick | Nat. | | | S/PS | L | | Prostrate, spreading forms. Glossy green leaves, white flowers, red berries. | Good plant for north and east exposures and slopes. Needs well drained soil. | N | N | N | N | N | |
| <i>Arenaria fendleri</i> | Fendler's Sandwort | Y | | | S | L | | Native habitat is in ponderosa clearings, high meadows, and 4,000 - 12,000 ft. elevation | Blooms are white and last from June - September. | N | N | N | N | N | |
| <i>Artemisa species</i> | Sagewort | Y | | | S | L | | Silvery green foliage. Small, yellow flowers. Needs to be trimmed. | Native. Fast growing. Many species available. | N | N | N | N | N | |
| <i>Artemesia schmidtiana</i> | Berberis Repens | Nat. | | | S | L | | Forms dome of silvery, wooly, leaves. Sage-like aroma. | | N | N | N | N | N | |
| <i>Asclepias tuberosa</i> | Butterflyweed | Y | | | S | L | | Grows in open grasslands, ponderosa meadows, and between 4,000 and 8,000 ft. | Yellow blooms from June - September. Salt tolerant. | N | N | N | N | N | |
| <i>Aurinia saxatilis</i> | Basket of Gold Alyssum | Nat. | | | S/PS | M | 6 - 12" | Grey 2-5" leaves from a spreading evergreen mound, dense clusters of golden yellow flowers. | Tolerates any well drained soil, use as any foreground plant in borders. Short bloom time. | Y | Y | Y | Y | Y | |
| <i>Berberis repens</i> | Oregon Grape | Y | | | S/PS | L | | Dark green, glossy leaves, yellow flowers, edible blue berries. | Native. | N | N | N | N | N | |

Native?: Y = Native; Nat. = Naturalized

Sun Requirements: S = Req. Full Sun; PS = Partial Shade; SH = Full Shade

Water Needs: L = Low; M = Medium; H = High

Section 3.030: City of Flagstaff Landscape Plant List

| Botanical Name | Common Name | Native? (Y/Nat.) | Over- story Tree | Under- story Tree | Sun Req. | Water Needs | Spacing | Special Characteristics | Notes / Comments | Parkways & Medians | | | | | Approved for R.O.W. |
|----------------------------------|--------------------------|---------------------|------------------------|-------------------------|----------|----------------|---------|---|---|--------------------|-----------|------------|----------|------------------------|------------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | Approved for R.O.W. | |
| <i>Berberis tomentosa</i> | Creeping Barberry | Y | | | PS | L | | Dark green glossy leaf. Yellow flowers, edible blue berries. Bronzy leaves in winter. | Native. Slow to spread. Susceptible to winter burn. | N | N | N | N | N | |
| <i>Callirhoe involucrata</i> | Winecups | Nat. | | | S/PS | M | | Native habitat is in dry areas in Utah above 6,000 ft. | Blooms pink from June - September. | N | N | N | N | N | |
| <i>Calylophus hartwegii</i> | Hartweg Evening Primrose | Y | | | S | L | | Native habitat in pinyon / juniper hillsides & plains. Elevation 3,000 - 7,000 ft. | Blooms yellow in May and June. | N | N | N | N | N | |
| <i>Castilleja integra</i> | Paintbrush | Y | | | S/PS | L | | Native habitat in pinyon / juniper and ponderosa woodlands; between 3,000 and 8,500 ft. | Blooms red and lasts from June - October. | N | N | N | N | N | |
| <i>Cerastium tomentosum</i> | Snow in Summer | Nat. | | | S/PS | M | 6 - 18" | Perennial, spreading dense, tuft mats of silvery-grey leaves, white flowers. | Fast growing. | Y | Y | Y | Y | Y | |
| <i>Coreopsis auriculata</i> | Mouse Ear Coreopsis | Nat. | | | S | M | 6 - 18" | Spreads by underground runners to form a 2' wide clump, bright orange-yellow flowers. | Best used in front of taller plants, in boarders and edging. | Y | Y | Y | Y | Y | |
| <i>Coreopsis tinctoria</i> | Annual Coreopsis | Nat. | | | S/PS | L | | Naturalized; native to the plains region. | Red blooms from June - October. | N | N | N | N | N | |
| <i>Cotoneaster horizontalis</i> | Rock Cotoneaster | Nat. | | | S/PS | M | | Low growing, spreading to 10', bright green above, pale beneath. Red berries. | Good for bank cover. Semi-evergreen. | N | N | N | N | N | |
| <i>Datura meteloides</i> | Scared Datura | Nat. | | | S/PS | L | | Native habitat is in canyon slopes, desert washes; elevation 1,000 - 6,000 ft. | Blooms white from June - September. | N | N | N | N | N | |
| <i>Delosperma cooperii</i> | Purple Ice Plant | Nat. | | | S | L | | Very hardy plant. Good for rock gardens | Has pink blooms from June - August. | N | N | N | N | N | |
| <i>Delosperma nubigenum</i> | Yellow Ice Plant | Nat. | | | S | L | | Succulent, bright green leaves. Red fall color, yellow flowers. | Good slope cover and in rock gardens. Feed for healthier plants. Do not over water. | N | N | N | N | N | |
| <i>Delphinium geraniifolia</i> | Larkspur | Nat. | | | PS | M | | Grows in coniferous forest clearings at 6,500 - 9,500 ft. | Blooms blue from July - September. | N | N | N | N | N | |
| <i>Echinacea purpurea</i> | Purple Coneflower | Nat. | | | PS | M | | Native to plains. | Purple blooms from July - September. | N | N | N | N | N | |
| <i>Erigeron divergens</i> | Fleabane | Y | | | S/PS | L | | Native habitat pinyon, juniper, ponderosa woods and plains at 1,000 - 9,000 ft. | White blooms from July - September. | N | N | N | N | N | |
| <i>Erigeron flagellaris</i> | Whiplash Daisy | Y | | | S/PS | L | | Grows in woodlands and meadows at 3,000 - 9,500 ft. | White blooms from June - August. | N | N | N | N | N | |
| <i>Eriogonum racemosum</i> | Redroot Buckwheat | Y | | | S/PS | L | | Native habitat is in ponderosa woodlands and meadows; from 5,000 - 9,000 ft. elevation. | Blooms white from July - September. | N | N | N | N | N | |
| <i>Eriogonium umbellatum</i> | Sulfer Buckwheat | Y | | | S | L | | Native habitat is in ponderosa woodlands and meadows; from 5,000 - 9,000 ft. elevation. | Yellow blooms in August and September. | N | N | N | N | N | |
| <i>Eschscholtzia californica</i> | California Poppy | Nat. | | | S | L | | Naturalized in urban areas. | Orange blooms in June and July. | N | N | N | N | N | |
| <i>Fragaria chiloensis</i> | Wild Strawberries | Nat. | | | S/PS | M | 6 - 18" | Evergreen. Occasional small edible berries. Needs annual mowing. | Good for slopes, water to spread and for berries. | Y | Y | Y | Y | Y | |

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Section 3.030: City of Flagstaff Landscape Plant List

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|-----------------------------------|---------------------------|------------------|-----------------|------------------|----------|-------------|---------|--|--|--------------------|-----------|------------|----------|---|--------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | | |
| <i>Fragaria ovalis</i> | American Strawberry | Y | | | PS/SH | M | | Natural habitat in plains, mesas, ponderosa clearings between 3,500 - 7,000 ft. elevation. | White blooms from June - September. | N | N | N | N | N | |
| <i>Gaillardia pinnatifida</i> | Adobe Blanketflower | Y | | | S | L | | Native habitat is woodland clearings, 3,500 - 5,500 ft. elevation. | Red blooms from June - September. | N | N | N | N | N | |
| <i>Gaillardia pulchella</i> | Blanketflower | Y | | | S | L | | Native habitat in ponderosa woodlands and meadows between 5,000 - 9,000 ft. elevation. | Red blooms from April - September. | N | N | N | N | N | |
| <i>Galium odoratum</i> | Sweet Woodruff | Nat. | | | PS/SH | L | | Lush dark green leaves, white flowers. | Fast growing. | N | N | N | N | N | |
| <i>Geranium richardsonii</i> | White Cranesbill | Y | | | PS/SH | M | | Grows wild in rich soil in mixed forests and canyons from 6,500 - 11,500 ft. elevation. | Blooms red from June - September. | N | N | N | N | N | |
| <i>Geum triflorum</i> | Prairie Smoke | Y | | | PS | M | | Native habitat is in woodlands, conifer forest, and meadows between 5,000 - 10,000 ft. elevation. | Blooms red from May - August | N | N | N | N | N | |
| <i>Helenium hoopesii</i> | Western Sneezeweed | Nat. | | | S/PS | M | | Native habitat in aspen groves and mountain meadows between 5,000 - 10,000 ft. | Yellow blooms from June - September. | N | N | N | N | N | |
| <i>Helianthella quinquenervis</i> | Aspen Sunflower | Y | | | S/PS | L | | Native habitat in plains, mesas, and ponderosa clearings between 1,500 - 8,000 ft. elevation. | Yellow blooms from July - October. | N | N | N | N | N | |
| <i>Helianthus maximiliani</i> | Maximilian's Sunflower | Y | | | S | L | | From New Mexico. Very showy. | Has yellow blooms from September - October. | N | N | N | N | N | |
| <i>Heterotheca villosa</i> | Gold Aster | Nat. | | | S/PS | L | | Native habitat is on shaded moist hillsides between 4,000 - 8,000 ft. elevation. | Yellow blooms from July - October. | N | N | N | N | N | |
| <i>Heterotheca villosa</i> | Coral Bells | Nat. | | | S/PS | M | | Native habitat in woodland meadows between 5,000 - 9,000 ft. elevation. | Blooms red from May - September. | N | N | N | N | N | |
| <i>Iberis sempervirens</i> | Candytuft | Nat. | | | S/PS | L | | Evergreen. Dark green leaves, white flowers. | Flowers should be pruned. | N | N | N | N | N | |
| <i>Ipomopsis aggregata</i> | Scarlet Gilia | Y | | | S | L | | Native habitat is in ponderosa woodland clearings between 5,000 - 9,000 ft. elevation. | Blooms red from June - September. | N | N | N | N | N | |
| <i>Iris missouriensis</i> | Western Blue Flag | Y | | | S/PS | M | | Native habitat is in moist clearings in forest and aspen groves between 6,000 - 9,000 ft. elevation. | Blooms blue from May - September. | N | N | N | N | N | |
| <i>Juniperus horizontalis</i> | Juniper | Nat. | | | S/PS | L | | Low creeping shrub. Many prostrate varieties available. | Evergreen. | N | N | N | N | N | |
| <i>Juniperus horizontalis</i> | Blue Rug (Carpet) Juniper | Nat. | | | S/PS | L | 6 - 18" | Leaf colors include green shades as well as silvery blue, gray and creamy yellow. | Very drought tolerant evergreen. | Y | Y | Y | Y | Y | |
| <i>Linum lewisii</i> | Blue Flax | Y | | | S/PS | L | | Native habitat is mixed woodland clearings between 3,500 - 9,500 ft. elevation. | Blooms blue from May - September. Salt tolerant. | N | N | N | N | N | |

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Section 3.030: City of Flagstaff Landscape Plant List

| Botanical Name | Common Name | Native? (Y/Nat.) | Over-story Tree | Under-story Tree | Sun Req. | Water Needs | Spacing | Special Characteristics | Notes / Comments | Parkways & Medians | | | | Approved for R.O.W. |
|---------------------------------|----------------------------|------------------|-----------------|------------------|----------|-------------|---------|---|--|--------------------|-----------|------------|----------|---------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | |
| <i>Lonicera species</i> | Honeysuckle | Nat. | | | S | L/M | 4 - 10' | Deep green shiny leaves. Showy white and red trumpet like flowers. | Very fragrant sent. This plant is appreciated at the pedestrian level not vehicular. | Y | Y | Y | Y | Y |
| <i>Lupinus argenteus</i> | Silver Lupine | Y | | | S/PS | L | | Native habitat is pinyon/ juniper woodlands between 6,000 - 9,500 ft. elevation. | Blooms blue from May - September. | N | N | N | N | N |
| <i>Lysimachis nummularia</i> | Moneywort, Creeping Jeenie | Nat. | | | PS/SH | M | | Form light green mat of roundish leaves. Yellow flowers. | Creeps with runners up to 2' long. | N | N | N | N | N |
| <i>Mahonia repens</i> | Creeping Mahonia | Y | | | S/PS | L/M | 6 - 18" | Dull blue-green leaves turn bronzy to pinkish in fall. | Makes a good ground cover, spreads quickly. | Y | Y | Y | Y | Y |
| <i>Machaeranthera canescens</i> | Purple Aster | Y | | | S/PS | L | | Native habitat is woodland clearings, 3,000 - 7,000 ft. elevation. | Blooms purple in September and October. | N | N | N | N | N |
| <i>Mirabilis multiflora</i> | Desert Four O'Clock | Y | | | S | L | | Natural habitat in open sandy areas and mesas between 2,500 - 6,500 ft. elevation. | Purple blooms from April - September. | N | N | N | N | N |
| <i>Monarda menthaefolia</i> | Beebalm | Y | | | PS | L | | Native habitat is along stream banks and springs between 5,000 - 9,000 ft. | Pink blooms in July and August. | N | N | N | N | N |
| <i>Nepeta faassenii</i> | Catmint | Nat. | | | S/PS | M | 6 - 18" | Cut faded flower stems to ground to encourage re-blooming. | Attractive to cats, will need protection. Variety. "Walker's Low" is good choice. | Y | Y | Y | Y | Y |
| <i>Oenothera hookeri</i> | Hooker Evening Primrose | Nat. | | | S/PS | L | 6 - 18" | Flowers are a silky bright yellow. | Plants need to be shaded in the hottest climates. | Y | Y | Y | Y | Y |
| <i>Oenothera pallida</i> | Pale Evening Primrose | Nat. | | | S | L | | Native habitat is dry open areas between 1,000 - 7,500 ft. elevation. | Blooms yellow in July and August. | N | N | N | N | N |
| <i>Oxytropis lambertii</i> | Lambert's Locoweed | Y | | | S/PS | L | | Native habitat in ponderosa / fir clearings and meadows 5,000 - 9,000 ft. elevation. | Purple blooms from June - September. | N | N | N | N | N |
| <i>Pachystima mysinites</i> | Mountain Lover | Nat. | | | PS/SH | L | | Light growing, spreading evergreen. Small shiny leathery leaves. Best in well drained soils. | Good plant for north and east exposures. | N | N | N | N | N |
| <i>Penstemon barbatus</i> | Scarlet Bugler | Y | | | S/PS | L | | Native habitat in oak and coniferous forests between 4,000 - 10,000 ft. elevation. | Red blooms from June - October. | N | N | N | N | N |
| <i>Penstemon clutei</i> | Sunset Penstemon | Y | | | S | L | | Occurs only near Sunset Crater in cinder soils. | Pink blooms in June and July. | N | N | N | N | N |
| <i>Penstemon comarrhinus</i> | Canyon Beardtongue | Y | | | S/PS | L | | Native habitat is ponderosa woodlands between 6,000 - 7,500 ft. elevation. | Purple blooms in June and July. | N | N | N | N | N |
| <i>Penstemon linarioides</i> | Mat Penstemon | Y | | | S | L | | Naturally occurs on slopes, ponderosa woodlands, and meadows between 4,500 - 9,000 ft. elevation. | Blue blooms from April - September. | N | N | N | N | N |
| <i>Penstemon pinifolius</i> | Pineleaf Penstemon | Y | | | S | L | | Grows in open areas in mountains of eastern Az. | Red blooms from April - September. | N | N | N | N | N |
| <i>Penstemon rostriflorus</i> | Bridge's Penstemon | Y | | | S | L | | Grows on dry slopes between 4,500 - 7,000 ft. elevation. | Red blooms from June - August. | N | N | N | N | N |

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Section 3.030: City of Flagstaff Landscape Plant List

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|------------------------------------|---------------------------|------------------|-----------------|------------------|-------------|-------------|---------|---|--|--------------------|-----------|------------|----------|---------------------|---------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | Approved for R.O.W. | |
| <i>Penstemon strictus</i> | Rocky Mountain Penstemon | Y | | | S | L | | Native habitat is dry slopes and drainage routes between 7,000 - 8,000 ft. elevation. | Blue blooms in June and July. | N | N | N | N | N | |
| <i>Potentilla hippiana</i> | Silvery Cinquefoil | Y | | | S | L | | Found in ponderosa woodlands and high meadows between 7,000 - 11,500 ft. elevation. | Has yellow blooms from June - September. | N | N | N | N | N | |
| <i>Potentilla tabernaemontanii</i> | Spring Cinqufoil | Nat. | | | S/PS | M | 6 - 18" | Tough and persistent, small butter yellow flowers. | Can endure limited foot traffic. | Y | Y | Y | Y | Y | |
| <i>Potentilla thurberi</i> | Red Cinquefoil | Y | | | PS | M | | Found in rich soil mixed forests and mountain canyons. | Red blooms from July - October. | N | N | N | N | N | |
| <i>Pseudocymopterus montanus</i> | Mountain Parsley | Y | | | PS | M | | Found in rich soils in mixed forests and grasslands from 5,500 - 12,000 ft. elevation. | Yellow blooms from May - October. | N | N | N | N | N | |
| <i>Ratibida columnaris</i> | Prairie Coneflower | Y | | | S | M | | Native habitat is in fields and woodland clearings. | Yellow blooms from June - October. | N | N | N | N | N | |
| <i>Rudbeckia laciniata</i> | Cutleaf Coneflower | Y | | | PS/SH | M | | Found in moist mountain meadows and stream-sides. | Blooms yellow from July - September. | N | N | N | N | N | |
| <i>Santolina virens</i> | Santolina | Nat. | | | S | L | | Dark green leaves, mounding form with protrusion of flower stalks. Gray species. | Fast growing. Evergreen. | N | N | N | N | N | |
| <i>Sedum spruium</i> | Sedum or Stonecrop | Nat. | | | S/PS | L | 6 - 18" | Succulent. Thick and wide leaves. Dark green or bronzy tinted. Pink flowers on trailing stem. | Fast growing. Good on slopes and rock gardens. Many varieties available. | Y | Y | Y | Y | Y | |
| <i>Sempervivum tectorum</i> | Hens 'N Chicks | Nat. | | | S/PS | L | | Succulent. Gray-green rosettes. Spreads by offsets. Red flowers in clusters. | Good for rock gardens. | N | N | N | N | N | |
| <i>Solidago sparsiflora</i> | Sparse-flowered Goldenrod | Y | | | S/PS | L | | Native habitat is chaparral and ponderosa clearings between 2,000 - 8,500 ft. elevation. | Yellow blooms from June - October. | N | N | N | N | N | |
| <i>Sphaeralcea coccinea</i> | Red Mallow | Y | | | S | L | | Grows in woodland clearings and mesas. | Scarlet blooms from July - September. | N | N | N | N | N | |
| <i>Stachys byzanina</i> | Lambs Ears | Nat. | | | S/PS | L | 6 - 18" | Perennial. Soft, thick, tongue-shaped leaves. Whorls of small purple flowers. | Variety "Silver Standard" is good selection. | Y | Y | Y | Y | Y | |
| <i>Tanacetum densatum</i> | Partridge Feather | Nat. | | | S | L | | Feathers foliage. | No blooms. | N | N | N | N | N | |
| <i>Teucrium chamaedrys</i> | Germander | Nat. | | | S | L | | Dark green leaves, flowers draw bees. | Good in poor, rocky, well drained soils. Prostrate varieties available. | N | N | N | N | N | |
| <i>Thalictrum fendleri</i> | Fendler's Meadow Rue | Y | | | PS/SH | L | | Native habitat in ponderosa, conifer forest and canyons. | White blooms from May - August. | N | N | N | N | N | |
| <i>Thermopsis pinetorum</i> | Golden Pea | Y | | | PS/SH | L | | Grows in mixed forests, aspen groves and meadows. | Yellow blooms in May and June. | N | N | N | N | N | |
| <i>Trifolium repens, hybridum</i> | Clover | Nat. | | | S | M | | Bright green, white or pink flowers. | Takes light foot traffic. | N | N | N | N | N | |
| <i>Thymus lanuginous</i> | Wholly Thyme | Nat. | | | S/PS | M | | Very fragrant. Also edible. | Has blue blooms in July. | N | N | N | N | N | |
| <i>Thymus serpyllum</i> | Thyme | Nat. | | | S/PS | M | | Scented foliage. Pink or purple flowers. | Fast growing. Takes light foot traffic. | N | N | N | N | N | |
| <i>Verbena macdougalii</i> | New Mexican Vervain | Y | | | S | L | | Grows in ponderosa and mixed conifer forests. | Purple blooms from July - September. | N | N | N | N | N | |
| <i>Veronica repens</i> | Speedwell | Nat. | | | S/PS/S H | M | | Leaf covered prostrate stems, seem moss-like. Lavender or white flowers. | Good cover for small landscape areas. | N | N | N | N | N | |

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|-----------------------------------|-------------------------|------------------|-----------------|------------------|----------|-------------|---------|---|--|--------------------|-----------|------------|----------|---|--------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | | |
| <i>Viguiera multiflora</i> | Goldeneye | Y | | | S | L | | Grows in clearings in woodlands. | Yellow blooms from September - October. | N | N | N | N | N | |
| <i>Vinca minor</i> | Periwinkle or Myrtle | Nat. | | | S/PS/SH | M | 6 - 18" | Dark green leaves, blue or pink or white flowers. | Fast growing and spreading can be weedy. Can suffer winter dieback. | Y | Y | Y | Y | Y | |
| <i>Waldsteinia fragarilodes</i> | Barren Strawberries | Nat. | | | S/PS | L | | Evergreen, strawberry-like foliage, yellow flowers. | | N | N | N | N | N | |
| Vines | | | | | | | | | | | | | | | |
| <i>Clematis lingusticifolia</i> | Western Virgins Bower | Y | | | PS | H | | Grows well along streams and in moist canyons. | Very fragrant. | N | N | N | N | N | |
| <i>Clematis pseudoalpina</i> | Virgins Bower | Nat. | | | S/PS | L | | Deciduous, with showy, purple flowers. | Native. | N | N | N | N | N | |
| <i>Hedera species</i> | Ivy | Nat. | | | S/PS | L | | Evergreen, woody vines. Fairly drought tolerant once established. | Holds soils on slopes. Hardy. | N | N | N | N | N | |
| <i>Lonicera arizona</i> | Arizona Honeysuckle | Y | | | S/PS | M | | Grows well in coniferous forests and canyons. | Fast growing. Red blooms in June and July. Attracts Humming birds. | N | N | N | N | N | |
| <i>Parthenocissus species</i> | Virginia Creeper | Nat. | | | S/PS | M | 6 - 18" | Deciduous, wood vine. Blueberries. Good fall cover. | | Y | Y | Y | Y | Y | |
| <i>Vitis arizonica</i> | Canyon Grape | Y | | | PS/ SH | M | | Grows along streams and in canyons. | Produces edible fruit. Can get bushy. | N | N | N | N | N | |
| Grasses | | | | | | | | | | | | | | | |
| <i>Agropyron cristatum</i> | Creasted Wheatgrass | Y | | | S/PS | L | | Cool season grass. Coarse texture, bunching rather than a sod forming grass. Best in medium to heavy soils. | Good substitute for Kentucky Blue Grass. Low maintenance. | N | N | N | N | N | |
| <i>Agropyron intermedium</i> | Intermediate Wheatgrass | Y | | | S | L | | Cool season grass, Vigorous and forming. Medium soils. | Good for low maintenance areas. | N | N | N | N | N | |
| <i>Agropyron riparium "sodar"</i> | Steambank Wheat | Y | | | S/PS | L | | Cool season grass. Course texture, sod forming, drought and shade tolerant, wide range of soils. | Good substitute for Kentucky Blue Grass, good cover for outlying low maintenance areas, spring dormant without irrigation. | N | N | N | N | N | |
| <i>Aristida purpurea</i> | Purple Three-Awn | Y | | | S | | | Grows well in sandy plains and on slopes. Establishes readily on disturbed sites. | Grows between 1,000 - 6,000 ft. Perennial. | N | N | N | N | N | |
| <i>Bouteloua curtipendula</i> | Sideoats Grama | Y | | | S/PS | | | Grows well on slopes, in woodlands and clearings. | Grows between 2,500 and 7,000 ft. Perennial. | N | N | N | N | N | |
| <i>Bouteloua gracilis</i> | Blue Grama | Y | | | S/PS | L | 6 - 18" | Perennial sod former, can be used as turf. | Slopes, meadows, clearings, 4,000 - 8,000 ft. | Y | Y | Y | Y | Y | |
| <i>Bouteloua curtipendula</i> | Side Oats Grama | Y | | | S | L | | Native bunchgrass. May develop rhizomes. Blue-green. | Seed head takes a reddish tinge by late summer. | N | N | N | N | N | |
| <i>Buchloe dactyloides</i> | Buffalo Grass | Y | | | S | L | | Warm season grass. Sod forming, medium to fine textured soils. | Combined with cool season type. Difficult to establish from seed, requires patience to achieve mature seed. | N | N | N | N | N | |
| <i>Calamagrostis acutiflora</i> | Karl Foerster Grass | Nat. | | | | | | | Salt tolerant. | | | | | | |
| <i>Festuca arizonica</i> | Arizona Fescue | Y | | | S/PS | L | | Native bunch grass. Gray-green color. | Dense at maturity with a foundation configuration. Salt tolerant. | N | N | N | N | N | |

Native?: Y = Native; Nat. = Naturalized

Sun Requirements: S = Req. Full Sun; PS = Partial Shade; SH = Full Shade

Water Needs: L = Low; M = Medium; H = High

Section 3.030: City of Flagstaff Landscape Plant List

| Botanical Name | Common Name | Native? (Y/Nat.) | Over-story Tree | Under-story Tree | Sun Req. | Water Needs | Spacing | Special Characteristics | Notes / Comments | Parkways & Medians | | | | | Approved for R-O-W |
|--------------------------------|---------------------------------|------------------|-----------------|------------------|----------|-------------|---------|--|--|--------------------|-----------|------------|----------|---|--------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | | |
| <i>Festuca arundinacea</i> | Tall Fescue | Nat. | | | S/PS | M | | Cool season, bunch grass, median/ coarse texture, dark green color, wide range of soils. | Improved varieties, rivals Kentucky Blue-Grass in appearance. | N | N | N | N | N | |
| <i>Festuca glauca</i> | Blue Fescue | Nat. | | | S/PS | L | 6 - 18" | Blue-green perennial bunchgrass, used as an ornamental grass. | Forest openings, rocky slopes 7,000- 11,000'. Salt tolerant. | Y | Y | Y | Y | Y | |
| <i>Festuca longifolia</i> | Hard Fescue | | | | S/PS | L | | Cool season, bunch grass, fine textures. Very green grass. | Establish in autumn or spring, available from cultivars or Sarra. | N | N | N | N | N | |
| <i>Festuca ovina "covar"</i> | Sheep Fescue | | | | S | L | | Cool season bunch grass. Clumping, fine textures. Very green grass. Best in medium to clay soils. | Establish in autumn or spring, available from cultivars or Sarra. | N | N | N | N | N | |
| <i>Hilaria jamesii</i> | Galleta Grass | | | | S | | | Grows well in sandy plateaus, broad valleys, and between 2,500 and 7,000 ft. | Rhizomatous Bunchy Sod Former. | N | N | N | N | N | |
| <i>Koeleria jamesii</i> | Prairie Junegrass | Y | | | S/ PS | | | Grows well in open forest, woodlands and between 4,000 - 9,000 ft. | Perennial Bunchgrass, forage, and establishes easily. | N | N | N | N | N | |
| <i>Lolium perenne</i> | Perennial Rygrass | Nat. | | | S/PS | H | | Cool season, bunch grass, coarse textured. Best in cool moist areas and in medium to clay soils. Glossy yellow green color. Wide range of soils. | Common constituent of seed mixtures with Kentucky Blue Grass. | N | N | N | N | N | |
| <i>Muhlenbergia montana</i> | Mountain Muhly | Y | | | S/PS | | | Grows well on rocky slopes, forest openings and between 4,500 and 9,500 ft. | Perennial Bunchgrass. | N | N | N | N | N | |
| <i>Muhlenbergia rigens</i> | Deer Grass | Y | | | S/PS | | | Needs deep drainage soils. | | N | N | N | N | N | |
| <i>Muhlenbergia wrightii</i> | Spike Muhly | Y | | | S/PS | | | Grows between 5,000 and 8,000 ft. | | N | N | N | N | N | |
| <i>Oryzopsis hymenoides</i> | Indian Ricegrass | Y | | | S | L | | Native Bluegrass. Prefers well-drained soils. Golden color when cured. | Was widely used for food by western Indian tribes. | N | N | N | N | N | |
| <i>Panicum vergatum</i> | Switchgrass | Y | | | S/PS | | | Likes sandy soils along water courses and elevations between 3500 and 7000 ft. | Rhizomatous sod former. Establishes easily. | N | N | N | N | N | |
| <i>Pascopyrum smithii</i> | Western Wheat | | | | S/PS | | | Grows on dry hills, forest openings and between 3,000 and 8,000 ft. | Rhizomatous sod former. Establishes easily. | N | N | N | N | N | |
| <i>Phalaris arundinacea</i> | Reed Canary Grass, Ribbon Grass | | | | S/PS | H | | Native perennial, rhizomatous habitat. Wide range of soils. | Requires supplemental moisture. Variety "Picta" provides striped form. | N | N | N | N | N | |
| <i>Poa fendleriana</i> | Mutton Grass | Y | | | S/PS | | | Grows in woodlands, sloped meadows and 5,000 and 11,000 ft. | Perennial Bunchgrass. | N | N | N | N | N | |
| <i>Schizachyrium scoparium</i> | Little Bluestem | Y | | | S/PS | | | Grows in woodlands, meadows, and between 4,000 and 7,500 ft. | Perennial Bunchgrass. Good forage, soil stabilization. | N | N | N | N | N | |
| <i>Sporobolus airoides</i> | Alkali Sacaton | Y | | | S | M | | Native bunchgrass. Cascading form with smoky crown. | Requires moist conditioning during establishment, drought tolerant thereafter. | N | N | N | N | N | |
| Perennials | | | | | | | | | | | | | | | |
| <i>Agastache rupestris</i> | Licorice Mint | Nat. | | | S | L | | Tolerates drought. Attracts hummingbirds. | Salt tolerant. | | | | | | |

Native?: Y = Native; Nat. = Naturalized

Sun Requirements: S = Req. Full Sun; PS = Partial Shade; SH = Full Shade

Water Needs: L = Low; M = Medium; H = High

Section 3.030: City of Flagstaff Landscape Plant List

| Botanical Name | Common Name | Native? (Y/Nat.) | Over- story Tree | Under- story Tree | Sun Req. | Water Needs | Spacing | Special Characteristics | Notes / Comments | Parkways & Medians | | | | Approved for R-O-W |
|-------------------------------|------------------------|---------------------|------------------------|-------------------------|----------|----------------|---------|--|--|--------------------|-----------|------------|----------|-----------------------|
| | | | | | | | | | | Urban | 5-8' Wide | 8-10' Wide | 10' Wide | |
| <i>Allyssum species</i> | Alyssum | | | | S/PS | L | | Mounding, bright green foliage. Yellow flower. Good in rock gardens. | Tolerates any well drained soil, use on slopes or level ground for edging along paths. | N | N | N | N | N |
| <i>Hemerocallis species</i> | Day Lillies | Nat. | | | S/PS | L | | Clumps of grass-like leaves, lily-like flowers in many colors. | Good boarder plant. | N | N | N | N | N |
| <i>Iris species</i> | Iris | Y | | | S | L | | Grass-like leaves, showy flowers. Many varieties available. | Good for boarders. | N | N | N | N | N |
| <i>Kniphofia uvaria</i> | Red Hot Poker | Nat. | | | S/PS | L | | Grass-like leaves, bright red, yellow or orange flowering spikes. | Drought tolerant. | N | N | N | N | N |
| <i>Lavandula vera</i> | Lavender | Nat. | | | S/PS | L | 6 - 18" | Gray-green, aromatic foliage. Fragrant blue flowers. | High risk for healthy survival. | Y | Y | Y | Y | Y |
| <i>Lavendula angustifolia</i> | English Lavender | Nat. | | | S | M | 6 - 18" | Sweet and fragrant, use for perfume and sachets. | Has gray-green to silver gray leaves, blooms mainly in early to mid-summer. | Y | Y | Y | Y | Y |
| <i>Penstemon species</i> | Penstemon | Y | | | S/PS | L | | Tubular, bell shaped flower. Popular and varied species. | Fast growing. Good for rock gardens. | N | N | N | N | N |
| <i>Penstemon grandiflorus</i> | Large Flower Penstemon | Y | | | S | L | | Great Plains native, flowers up to 2" across | Has pink blooms in July | N | N | N | N | N |
| <i>Phlox subulata</i> | Phlox, Moss Pink | Nat. | | | S/PS | L | | Evergreen, small needle-like leaves. Flowers of white, pink or blue. | Good for poor soils. | N | N | N | N | N |
| <i>Zinnia grandiflora</i> | Prairie Zinnia | | | | S | L | | Yellow flowers. Grayish foliage. | Native. Fast growing. | N | N | N | N | N |

Native?: Y = Native; Nat. = Naturalized

Sun Requirements: S = Req. Full Sun; PS = Partial Shade; SH = Full Shade

Water Needs: L = Low; M = Medium; H = High

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Low Water Use Drought Tolerant Plant List

*Official Regulatory List for the Arizona Department
of Water Resources, Tucson Active Management Area*

*400 W. Congress, Suite 518
Tucson, AZ 85701*

*(520) 770-3800
www.azwater.gov*

Photo - Christina Bickelmann© 2004

DROP YOUR WATER USE!

Tucson is Educating Consumers to Drop their Water Use . . .

The Tucson office of the Arizona Department of Water Resources (ADWR) has developed a new pilot program, **Drop Your Water Use**, to educate retail nursery customers on how to plan and maintain a healthy and water efficient landscape.

The program is a voluntary collaboration between ADWR and local nurseries that uses a simple water drop system to identify plants with similar water requirements. Plants are labeled one through three, distinguished with corresponding water drops and numbers.

All of the labeled plants are Xeriscape plants currently on the Tucson AMA -Low Water Use/ Drought Tolerant plant list. The one through three numbering system correlates with the plant list.



A “number one” indicates very low water use mostly native Sonoran and Chihuahuan desert plants,



Two is low water use,



Three is moderate water use.

By choosing plants with the same number a gardener can more successfully group plants by water needs.

Although the plants are all low-water-using, the frequency that they need to be irrigated varies from approximately once a week to once a month after the plants are established (in about 2-3 years). ADWR hopes that consumers will use separate valves on their irrigation system to water each zone and irrigate trees separately, enabling them to manage their irrigation water use more efficiently.

To date, fourteen Tucson retail nurseries and all six Tucson area Home Depot's have signed up for the program. ADWR is working with other nurseries to encourage them to participate. Wholesale nurseries in Phoenix and Tucson are also participating in the program by adding water drop symbols to the labels on plants to be sold in Tucson.

Retail nurseries that participate receive free posters, water drop stickers for their signage and handouts for their customers explaining the program and watering guidelines. In addition all participating nurseries will be listed on the ADWR website and will be promoted in press releases and at community events.

Anyone interested in more information or Tucson nurseries that would like to sign up for the program should contact Christina Bickelmann, Water Conservation Specialist for the Tucson ADWR office @ (520) 770-3816 or email: cbickelmann@azwater.gov

LOW WATER USE/DROUGHT TOLERANT PLANT LIST

OFFICIAL REGULATORY LIST FOR:

**Arizona Department of Water Resources - Tucson Active Management Area
Pima County, City of Tucson, Town of Oro Valley, Town of Marana**

This official regulatory list was developed to guide the regulated community in choosing low water-use and drought tolerant plants for landscaping. Landscaping planted after January 1, 1987 within publicly owned rights-of-way and irrigated with groundwater may be planted only with plants listed on the ADWR Low Water Use/ Drought Tolerant Plant List for the Tucson AMA. The director may waive this requirement under special circumstances. This requirement does not apply to any portion of a residential lot that extends into a publicly owned right-of-way. Many local jurisdictions have adopted this list for regulatory purposes; contact your local jurisdiction for their landscape requirements.

This list can also be used as a resource for residents and businesses that are interested in conserving water. The list provides a wide array of plants to accomplish a variety of low water-use landscape designs.

The plants on this list can be grown in the Tucson area with very low to moderate supplemental irrigation once they are established. Supplemental irrigation should be of sufficient quantity to saturate the plant's root zone. All plants listed can grow with less water than traditional high water-use landscape plants and do not require more than the ADWR regulations for low water-use plants in the Tucson AMA, a maximum of 18 inches of supplemental irrigation on an annual basis, not including rainfall. In addition to water requirements, other suitability factors (e.g. highly invasive, cold hardiness, etc.) may be considered to determine acceptability of individual plants for addition to the list.

Applications for additions, deletions or exceptions to this list may be submitted to the Department of Water Resources, Tucson Active Management Area Office for consideration. Phone: (520) 770-3800. The list and application forms may be downloaded from the ADWR website at www.azwater.gov/TAMA.

An advisory committee of local plant experts reviews all applications for modification and submits recommendations to the AMA Director for final consideration.

Updated March 2007

Key to symbols:

Water use (WU)

- 1 – Very low, irrigate every 3-4 weeks during the growing season after establishment
- 2 – Low, irrigate every 2-3 weeks during the growing season after establishment
- 3 – Moderate, irrigate weekly during the growing season after establishment

* Average annual rainfall for Tucson is 11-12"; in low rainfall years the plants on the list may need additional irrigation to maintain good appearance and plant health.

Irrigation: most plants require regular irrigation during the first 2- 3 year establishment period

Growing Season (GS):

Wi winter – apply water September through March; less frequently in off season

Su summer – apply water March through September; less frequently in off season

Plant Type (PT):

| | | | |
|----|------------------|----|-----------|
| A | accent plant | S | shrub |
| C | cactus | Sc | succulent |
| Gc | groundcover | T | tree |
| Gr | ornamental grass | V | vine |
| An | annual | P | perennial |

Flower Color:

Includes annotations for fall color, berries

H: Mature plant height measured in feet

W: Mature canopy size measured in feet

Allergenicity (AL):

- a strongly allergenic
- b moderately allergenic
- c weakly allergenic

Cold Hardiness: if plants do not suffer any damage at 20° F or below they are considered cold hardy and do not have a code in the column

(sh) semi-hardy - some dieback in a hard frost (mid 20's F)

(t) tender - severely damaged or killed in a hard frost; when temperatures drop to 32° F or below

Note: the timing of the freeze, duration of the freeze, the temperatures the next day and the second night temperatures will affect how severely damaged the plant will be.

Allergenicity of the plants was classified with the help and advice of Michael J. Schumacher, M.D., Professor, Dept. of Pediatrics and Head, Allergy-Immunology Section, Univ. of Arizona Health Sciences Center and Mark R. Sneller, Ph.D., Office of Pollen and Mold Control, Pima County Health Dept.

Native Plants are listed under Origin using the following symbols:

- CD Chihuahuan Desert- includes north central and NW Mexico, SW Texas, southern New Mexico and extreme SE Arizona
- SD Sonoran Desert – includes arid and semi-arid areas of NW Mexico, SE California and most of Arizona south of the Mogollon Rim

Note: Chihuahuan and Sonoran Desert Regions annotated by Matt Johnson, Native Plant Society.

Special Considerations:

Toxic: may be harmful if eaten. Call Arizona Poison Control Center at 626-6016

Invasive (INV): may spread and intrude into natural areas

Spreads in Cultivated Areas (SCA): may spread by seed or sucker in urban or cultivated areas, and in disturbed soils

Low Water Use Drought Tolerant Plant List - Tucson Active Management Area

| WU | BOTANICAL NAME | COMMON NAME | FLOWER COLOR | BLOOM SEASON | PT | H | W | GS | TOXIC | AL | INV | SCA | HARDY | ORIGIN |
|----|---------------------------|---------------------------|---------------|----------------------------|------|----|----|----|-------|----|-----|-----|-------|--------|
| 2 | Abutilon palmeri | Indian Mallow | Apricot | Summer | S | 3 | 4 | Su | | | | | sh | SD |
| 2 | Acacia aneura | Mulga | Yellow | Spring | T | 18 | 18 | Su | | c | | | sh | Austr. |
| 2 | Acacia angustissima | White Ball Acacia | White | Late Spring to Late Summer | S | 5 | 5 | Su | | c | | | sh | SD |
| 3 | Acacia berlandieri | Guajillo | White | Summer | T,S | 15 | 15 | Su | | c | | | | CD |
| 1 | Acacia constricta | Whitehorn, Mescal Acacia | Yellow | Spring to Summer | T,S | 20 | 20 | Su | | c | Yes | Yes | | SD,CD |
| 1 | Acacia crasspedocarpa | Waxleaf Acacia | Yellow | Spring to Summer | T,S | 15 | 15 | Su | | c | | | | Austr. |
| 2 | Acacia cultriformis | Knife-leaf Acacia | Yellow | Spring | T,S | 15 | 15 | Su | | c | | | sh | Austr. |
| 3 | Acacia farnesiana (small) | Southwestern Sweet Acacia | Yellow | Spring | T,S | 25 | 25 | Su | | c | Yes | Yes | | SD,CD |
| 1 | Acacia greggii | Catclaw Acacia | Creamy Yellow | Spring to Summer | T,S | 15 | 20 | Su | | c | Yes | Yes | | SD,CD |
| 2 | Acacia notabilis | Notable Acacia | Yellow | Late Spring | S | 8 | 15 | Su | | c | | | | Austr. |
| 2 | Acacia redolens | Prostrate Acacia | Yellow | Spring | S,Gc | 5 | 12 | Su | | c | | | | Austr. |
| 2 | Acacia rigidula | Black Brush Acacia | Yellow | Spring | T,S | 15 | 9 | Su | | c | | | | CD |
| 2 | Acacia salicina | Willow Acacia | Creamy White | Spring | T | 40 | 30 | Su | | c | | | sh | Austr. |
| 2 | Acacia saligna | Weeping Wattle | Orange-Yellow | Early Spring | T | 25 | 20 | Su | | c | | | sh | Austr. |

| WU | BOTANICAL NAME | COMMON NAME | FLOWER COLOR | BLOOM SEASON | PT | H | W | GS | TOXIC | AL | INV | SCA | HARDY | ORIGIN |
|----|---|-----------------------------------|--------------------------------|-------------------------------|------|----|----|----|-------|----|-----|-----|-------|---------|
| 3 | Acacia schaffneri | Twisted Acacia | Yellow | Spring | T | 20 | 25 | Su | | c | | | | CD |
| 2 | Acacia stenophylla | Pencilleaf Acacia | Creamy White | Early Spring | T | 30 | 20 | Su | | c | | | | Austr. |
| 2 | Acacia willardiana | Palo Blanco | Pale Yellow | Spring | T | 20 | 10 | Su | | c | | | sh | SD |
| 3 | Achnatherum hymenoides (Oryzopsis hymenoides) | Indian Ricegrass | Green | Spring | Gr | 2 | 2 | Su | | a | | | | SD,CD |
| 1 | Agave americana & varieties | Century Plant | Yellow | Once (Summer) | A,Sc | 7 | 8 | Su | | | | | | CD |
| 2 | Agave angustifolia v. marginata | Narrow leaf Agave | Greenish-Yellow | Once (Summer to Fall) | A,Sc | 3 | 4 | Su | | | | | t | Mex. |
| 2 | Agave bovicornuta | Cow's Horn Agave | Yellow | Once (Spring to Summer) | A,Sc | 3 | 4 | Su | | | | | sh | Mex. |
| 2 | Agave bracteosa | Spider Agave | White, orange | Once (Summer) | A,Sc | 2 | 2 | Su | | | | | | |
| 2 | Agave celsii | | Greenish with purple/red tinge | Once | A,Sc | 2 | 2 | Su | | | | | | E. Mex. |
| 2 | Agave chrysantha | Golden Flower Agave | Yellow | Once (Summer) | A,Sc | 3 | 4 | Su | | | | | sh | AZ |
| 2 | Agave colorata | Mescal Ceniza, Blue Century Plant | Yellow | Once (Spring to early Summer) | A,Sc | 3 | 3 | Su | | | | | | SD |
| 2 | Agave desmettiana & varieties | Smooth Agave | Pale Yellow | Once (Spring) | A,Sc | 3 | 6 | Su | | | | | t | Mex. |
| 2 | Agave filifera | Agave | Green then reddish | Once (Summer) | A,Sc | 2 | 3 | Su | | | | | | CD |
| 2 | Agave geminiflora-solitary | Twin-flowered Agave | Yellow tinged with red | Once (Fall to Winter) | A,Sc | 3 | 3 | Su | | | | | sh | Mex. |
| 2 | Agave havardiana | Havard Agave | Greenish Yellow | Once (Spring) | A,Sc | 3 | 4 | Su | | | | | | CD |

| WU | BOTANICAL NAME | COMMON NAME | FLOWER COLOR | BLOOM SEASON | PT | H | W | GS | TOXIC | AL | INV | SCA | HARDY | ORIGIN |
|----|-------------------------------|----------------------------------|-------------------------------|---|-------|----|-----|----|-------|----|-----|-----|-------|--------------|
| 2 | Agave lophantha (univittata) | Holly Agave; Center Stripe Agave | Greenish Yellow | Once | A,Sc | 3 | 6 | Su | | | | | | CD |
| 2 | Agave macroacantha | Black Spine Agave | Green | Once | A,Sc | 2 | 2 | Su | | | | | sh | Mex. |
| 2 | Agave montana | Mountain Agave | Green, Creamy White | Once | A,Sc | 4 | 6 | Su | | | | | | Mex. |
| 2 | Agave multiflora | Chahuiqui | Light Green with Pink Margins | Once | A,Sc | 3 | 5 | Su | | | | | sh | CD |
| 2 | Agave murpheyi | Murphy Agave | Pale Green | Once (Fall) produces bulbils on flower stalk | A,Sc | 3 | 3 | Su | | | | | | SD |
| 2 | Agave ocahui | Ocahui Agave | Yellow | Once (Spring to Summer) | A,Sc | 3 | 3 | Su | | | | | | SD |
| 2 | Agave ovatifolia | Whales Tongue Agave | Pale Green | Once | A,Sc | 3 | 3 | Su | | | | | sh | Mex. |
| 2 | Agave palmeri | Palmer Agave | Pale Green | Once (Summer) produces bulbils on flower stalk | A,Sc | 4 | 4 | Su | | | | | | SD |
| 2 | Agave parrasana | Parras Agave | Yellow | Once | A,Sc | 2 | 2 | Su | | | | | | Mex. |
| 2 | Agave parryi & varieties | Agave | Yellow | Once (Summer) | A, Sc | 2 | 2 | Su | | | | Yes | | CD |
| 2 | Agave parryi var. huachuensis | Huachuca Agave | Pink buds opening to Yellow | Once (Late Spring to early Summer) | A,Sc | 2 | 3 | Su | | | Yes | Yes | | SD |
| 2 | Agave parviflora | Small Flowered Agave | Pale Yellow | Once (Summer) | A,Sc | .5 | .7 | Su | | | | | | SD |
| 2 | Agave pelona | Mescal Pelon | Red | Once (Spring) | A, Sc | 2 | 2.5 | Wi | | | | | | SD |
| 2 | Agave potatorum | Butterfly Agave | Pale Green | Once | A,Sc | 1 | 2 | Su | | | | | t | Oaxaca Mex. |
| 2 | Agave salmiana ssp. Ferox | Puque Agave; Salm's Agave | Yellow above Green below | Once | A,Sc | 4 | 6 | Su | | | | | sh | Central Mex. |

| WU | BOTANICAL NAME | COMMON NAME | FLOWER COLOR | BLOOM SEASON | PT | H | W | GS | TOXIC | AL | INV | SCA | HARDY | ORIGIN |
|----|-------------------------------------|--------------------------------|-------------------------------|--|------|----|-----|----|-------|----|-----|-----|-------|----------------|
| 2 | Agave scabra | Rough-leaved Agave | Yellow | Once (Late Spring to Fall) | A,Sc | 4 | 4 | Su | | | | | | CD |
| 2 | Agave schidigera | Agave | Dark Purple | Once (Fall to Spring) | A,Sc | 2 | 3 | Su | | | | | | Durango Mex. |
| 2 | Agave shawii | | Yellow | Once (Spring) | A,Sc | 3 | 5 | Su | | | | | sh | Baja Cal. Mex. |
| 2 | Agave striata | Needle-leaf Agave, Espidine | Yellow, sometimes Red- Purple | Once (Summer) | A,Sc | 3 | 3 | Su | | | | | | Mojave D |
| 2 | Agave utahensis | | Yellow | Once | A,Sc | 1 | 2 | Su | | | | | | Mojave D |
| 2 | Agave victoriae-reginae & varieties | Queen Victoria Agave | Reddish Purple | Once (Summer) | A,Sc | 1 | 2 | Su | | | | | | Mex. |
| 2 | Agave vilmoriniana | Octopus Agave | Yellow | Once (Spring) produces bulbils on flower stalk | A,Sc | 4 | 6 | Su | | | | | sh | SD |
| 2 | Agave weberi | Weber Agave | Yellow | Once | A,Sc | 4 | 6 | Su | | | | | | Mex. |
| 1 | Aloe barbadensis | Aloe Vera, Medicinal Aloe | Yellow, Orange, Red | Late Winter to Summer | Sc | 2 | 2 | Wt | | | | | sh | Africa |
| 2 | Aloe ferox | Cape Aloe | Orange Red | Late Winter early Spring | Sc | 15 | 3 | Su | | | | | sh | Africa |
| 1 | Aloe saponaria | Tiger Aloe, Mediterranean Aloe | Yellow, Orange, Red | Winter to Spring | Sc | 1 | 1 | Wt | | | | | sh | Africa |
| 2 | Aloe variegata | Partridge Breast Aloe | Dark Pink to Red | Winter to Spring | Sc | 1 | 1.5 | Su | | | | | | Africa |
| 2 | Aloe x 'Blue Elf' | | Orange-Red | Winter to Spring | A,Sc | 2 | 1 | Wt | | | | | sh | garden variety |
| 2 | Aloysia gratissimma | Fragrant Bush, Bee Bush | White | Spring | S | 6 | 8 | Su | | | Yes | Yes | | SD,CD |
| 2 | Aloysia wrightii | Wright's Bee Bush | White | Spring to Fall | S | 4 | 4 | Su | | | | | | SD,CD |

| WU | BOTANICAL NAME | COMMON NAME | FLOWER COLOR | BLOOM SEASON | PT | H | W | GS | TOXIC | AL | INV | SCA | HARDY | ORIGIN |
|----|--------------------------------------|-----------------------------|------------------------------|---------------------------|------|-----|----|----|-------|----|-----|-----|-------|--------|
| 1 | Ambrosia deltoidea (Franseria) | Triangle-leaf Bursage | inconspicuous | Mid-Winter to mid-Spring | S | 2 | 2 | Wl | | a | | | | SD |
| 1 | Ambrosia dumosa (Franseria) | White Bursage | inconspicuous | Mid-Winter to mid-Spring | S | 2 | 2 | Wl | | a | | | | SD |
| 3 | Amsonia grandiflora | Large-flowered Blue Star | White tinged with Lavender | Spring to early Summer | S,P | 3 | 3 | Su | | | | | | SD |
| 2 | Anisacanthus quadrifidus & varieties | Flame Anisacanthus | Orange, Red | Summer to Fall | S | 5 | 5 | Su | | | | | | CD |
| 2 | Anisacanthus thurberi | Desert Honeysuckle | Orange | Spring to Fall | S | 6 | 4 | Su | | | | | | SD |
| 2 | Antigonon leptopus | Queen's Wreath | Pink, White, Red | Summer and Fall | V | 20 | 20 | Su | | | | | t | SD |
| 2 | Aristida purpurea | Purple Three-awn | Green, Green to Blue foliage | Spring to early Fall | Gr | 2 | 1 | Su | | | Yes | Yes | | SD,CD |
| 2 | Artemisia ludoviciana | Prairie Sagebrush, Wormwood | inconspicuous | July-Oct | S,Gc | 1 | 3 | Su | | a | | | | SD |
| 3 | Asclepias linaria | Pine Leaf Milkweed | White | Spring to Fall | S | 3 | 3 | Su | Yes | | | | | SD,CD |
| 1 | Asclepias subulata | Desert Milkweed | Pale Yellow, White | Late-Spring to Fall | P | 3 | 3 | Su | Yes | | | | sh | SD |
| 1 | Aster bigelovii | Purple Aster | Blue | Late-Summer to early Fall | An | 1-3 | .5 | Su | | | | | t | SD |
| 1 | Aster tanacetifolius | Purple Aster | Purple | Summer to Fall | An | 1.5 | .5 | Su | | | | | t | SD,CD |
| 1 | Atriplex canescens | Four-Wing Saltbush | inconspicuous | Spring to Fall | S | 4 | 8 | Su | | a | | | | SD,CD |
| 2 | Atriplex lentiformis | Quail Bush | Greenish | Late Winter to Spring | S | 10 | 15 | Su | | a | | | | SD |
| 2 | Atriplex lentiformis breweri | Brewer Saltbush | Light Yellow | Summer | S | 10 | 10 | Su | | a | | | | SD |

| WU | BOTANICAL NAME | COMMON NAME | FLOWER COLOR | BLOOM SEASON | PT | H | W | GS | TOXIC | AL | INV | SCA | HARDY | ORIGIN |
|----|--|----------------------------------|---|-----------------------------|-----|------|----|----|-------|----|-----|-----|-------|-----------------|
| 1 | Atriplex nummularia | Old Man Saltbush | inconspicuous | | S | 9 | 15 | Su | | a | | | | Austr. |
| 1 | Atriplex polycarpa | Desert Saltbush | inconspicuous | | S | 3 | 6 | Su | | a | | | | SD |
| 2 | Atriplex semibaccata | Australian Saltbush | inconspicuous | April through September | S | 1 | 6 | Su | | a | | | | Austr. |
| 2 | Baccharis hybrid 'Starr' | Thompson Broom | inconspicuous Tan | | Gc | 4 | 5 | Su | | c | | | | garden cultivar |
| 2 | Baccharis sarothroides and hybrids (male varieties only) | Desert Broom | Cream, White | Fall | S | 9 | 9 | Su | | a | | | | SD |
| 1 | Bahia absinthifolia | Desert Daisy | Yellow | Spring to Fall | P | 1 | .5 | Wi | | | | | | SD |
| 1 | Baileya multiradiata | Desert Marigold | Yellow | Spring through Fall | P | 1 | 1 | Wi | Yes | | | | | SD,CD |
| 3 | Bauhinia lunarioides | Pink or White Orchid Tree | Pink, White | Spring to early Summer | S | 12 | 10 | Su | | | | | | CD |
| 2 | Bebbia juncea | Sweet Bush, Chuckwalla's Delight | Yellow | Spring to Fall | S,P | 4 | 4 | Su | | | Yes | | | SD,CD |
| 3 | Berberis harrisoniana | Barberry | Yellow | Late-Winter to early-Spring | S | 3 | 3 | Su | | | | | | SD |
| 2 | Berberis trifoliata | Algeria | Yellow | Spring | S | 8 | 8 | Su | | | | | | SD |
| 3 | Berlandiera lyrata | Chocolate Flower | Yellow with Maroon center | Spring to Fall | P | 2 | 2 | Su | | | Yes | | | SE, AZ |
| 2 | Boehriochloa barbinodis | Cane Beardgrass, Cane Bluestem | Green | Late-Spring to early-Fall | Gr | 3 | 3 | Su | | c | | | | SD,CD |
| 2 | Bougainvillea spp. | Bougainvillea | Purple, Red, Orange, Pink | Late Spring to Fall | S,V | 20 | 20 | Su | | | | | t | Brazil |
| 2 | Bouteloua spp. | Grama Grass | varies by species Green, Pink, Orange, Purple | Summer to Fall | Gr | .5-3 | 1 | Su | | a | | | | SD,CD |

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|----|---|-----------------------------------|-------------------------|---------------------|-----|-----|----|----|-------|----|-----|-----|-------|-----------|
| 2 | Brachychiton populneus | Bottle Tree | Pink | Late Spring | T | 45 | 30 | Su | | | | | | Austr. |
| 3 | Brabea (Erythea) armata | Mexican Blue Palm | White | Spring | T | 30 | 10 | Su | | c | | | | SD |
| 3 | Buchloe dactyloides | Buffalo Grass | Tan | Summer to Fall | Gr | .5 | .5 | Su | | a | | | | CD |
| 1 | Buddleia marubifolia | Woolly Butterfly Bush | Orange | Spring and Summer | S | 5 | 5 | Su | | | | | | CD |
| 3 | Bulbine frutescens and cultivars | Shrubby Bulbine | Yellow to Orange | Fall to Spring | Sc | 2 | 2 | Wi | | | | | sh | S. Africa |
| 2 | Caesalpinia (Poinciana) gilliesii | Yellow Bird of Paradise | Yellow with Red stamens | Late Spring to Fall | S | 10 | 6 | Su | Yes | | Yes | Yes | | S. Amer. |
| 2 | Caesalpinia (Poinciana) mexicana | Mexican Bird of Paradise (yellow) | Yellow | Spring to Summer | S | 15 | 10 | Su | Yes | | Yes | Yes | | CD |
| 3 | Caesalpinia cacalaco | Cascadote | Yellow | Winter | S | 15 | 18 | Su | Yes | | | | t | Mex. |
| 3 | Caesalpinia pulcherrima | Red Bird of Paradise | Red, Orange | Summer | S | 6-8 | 6 | Su | Yes | | | | sh | Caribb. |
| 2 | Callaeum lilacina (Mascagnia) | Purple Orchid Vine | Purple | Spring and Summer | V | 15 | 10 | Su | | | | | | CD |
| 2 | Callaeum macropterum (Mascagnia macroptera) | Yellow Orchid Vine | Yellow | Spring and Summer | V | 25 | 25 | Su | | | Yes | | sh | SD,CD |
| 2 | Calliandra californica | Baja Fairy Duster | Red | Spring through Fall | S | 6 | 6 | Su | | | | | sh | SD |
| 1 | Calliandra eriophylla | Fairy Duster, False Mesquite | Pink | Spring | S | 3 | 4 | Su | | | | | | SD |
| 2 | Calliandra peninsularis | Red Calliandra, Baja Fairy Duster | Red | Winter to Spring | S | 6 | 6 | Su | | | | | sh | SD |
| 3 | Callistemon citrinus | Lemon Bottlebrush | Red | Off and on all year | T,S | 15 | 10 | Su | | c | | | sh | Austr. |

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|----|--|-------------------------------------|-------------------------------|-----------------------|-------|-----|-----|--------|-------|----|-----|-----|-------|-----------|
| 3 | Calyiophus hartwegii & varieties | Calyiophus, Yellow Evening Primrose | Yellow | Spring to Summer | Gc | 1.5 | 3 | Su, Wl | | | Yes | Yes | | CD, SD |
| 3 | Campsis radicans | Common Trumpet Creeper | Orange, Red | Summer to Fall | V | 20 | 20 | Su | | | | | sh | SE U.S. |
| 1 | Carnegiea gigantea | Saguaro | White | Early Summer | C | 50 | 25 | Su | | | | | | SD |
| 3 | Carpobrotus edulis (Mesembryanthemum edulis) | Ice Plant | Pale Yellow to Pinkish Purple | Summer | Gc,Sc | 1 | 6 | Wl | | | | | t | Africa |
| 2 | Cassia artemisioides (Senna) | Wormwood Senna, Feathery Cassia | Yellow | Late Winter to Spring | S | 5 | 5 | Wl | | | | | sh | Austr. |
| 2 | Cassia nemophila (C. eremophila) | Green Cassia | Yellow | Winter to Spring | S | 9 | 6 | Wl | | | Yes | Yes | | Austr. |
| 2 | Cassia phyllodinea | Silvery Cassia | Yellow | Winter to Spring | S | 6 | 6 | Wl | | | | | | Austr. |
| 2 | Casuarina cunninghamiana | Australian Pine | | | T | 70 | 35 | Su | | b | | | | Austr. |
| 2 | Casuarina stricta | Coast Beefwood | | | T | 35 | 25 | Su | | b | | | | Austr. |
| 2 | Cathastecum erectum | False Grama | Green | Summer | Gr | .5 | 1 | Su | | c | | | | SD |
| 1 | Celtis pallida | Spiny or Desert Hackberry | Greenish-yellow | Spring | S | 16 | 10 | Su | | a | | | | SD,CD |
| 3 | Celtis reticulata | Netleaf or Western Hackberry | Greenish | March through Summer | T | 30 | 30 | Su | | a | | | | SD,CD |
| 3 | Centaurea cineraria | Dusty Miller | Purple, Yellow | Summer | P | 3 | 3 | Wl | | | | | | Medit. |
| 2 | Cephalophyllum aestonii 'Red Spike' | Red Spike Ice Plant | Reddish-purple | Winter to Spring | Gc,Sc | 0.5 | 1.5 | Wl | | | | | | S. Africa |
| 3 | Ceratonia siliqua | Carob, St. John's Bread Tree | Pink | Spring | T | 40 | 40 | Su | | | | | sh | Medit. |

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|----|---|-------------------------------|-------------------------------------|--------------------------|------|----|----|----|-------|----|-----|-----|-------|----------|
| 3 | <i>Cercis canadensis</i> v. <i>mexicana</i> | Mexican Redbud | Magenta | Early Spring | T,S | 15 | 15 | Su | | | | | | CD |
| 1 | <i>Cereus hildmannianus</i> (C. <i>peruvianus</i>) | Peruvian Cereus, Hedge Cactus | White | Night blooming in Summer | C | 20 | 10 | Su | | | | | sh | S. Amer. |
| 3 | <i>Chamaerops humilis</i> | Mediterranean Fan Palm | insignificant | n/a | T | 15 | 10 | Su | | c | | | | Spain |
| 3 | <i>Chilopsis linearis</i> and cultivars | Desert Willow | White, Lavender, Pink, Purple | Late-Spring to Fall | T,S | 30 | 30 | Su | | | Yes | Yes | | SD,CD |
| 2 | <i>Chrysactinia mexicana</i> | Damianta Daisy | Yellow-Gold | Spring and Fall | S | 2 | 2 | Su | | | | | | SW U.S. |
| 2 | <i>Cissus trifoliata</i> v. <i>incisa</i> | Desert Grape Ivy | inconspicuous | Summer | V | 20 | 20 | Su | | | Yes | Yes | | SD,CD |
| 2 | <i>Condalia globosa</i> | Bitter Condalia | White inconspicuous, fragrant | Early Spring | T,S | 15 | 20 | Su | | | | | | SD |
| 1 | <i>Condalia warnockii</i> v. <i>kearneyana</i> | Condalia, Mexican Pincushion | White | Early Spring | S | 6 | 5 | Su | | | | | | SD,CD |
| 2 | <i>Convolvulus creorum</i> | Bush Morning Glory | White | Late Spring to Fall | S,Gc | 2 | 3 | Wf | Yes | | | | | S. Eur. |
| 3 | <i>Convolvulus mauritanicus</i> | Ground Morning Glory | Sky Blue | Spring and Summer | Gc | .5 | 2 | Wf | | | | | sh | Africa |
| 2 | <i>Cordia boissieri</i> | Anacahuita, Texas Olive | White | Spring to Fall | T,S | 15 | 15 | Su | | | | | sh | CD |
| 2 | <i>Cordia parvifolia</i> | Littleleaf Cordia | White | Spring to Fall | S | 8 | 10 | Su | | | | | | SD,CD |
| 3 | <i>Cupressus arizonica</i> & varieties | Rough-barked Arizona Cypress | inconspicuous | n/a | T | 50 | 20 | Su | | a | | | | SD,CD |
| 3 | <i>Cupressus glabra</i> | Smooth Bark Cypress | n/a | n/a | T | 40 | 20 | Su | | a | | | | SD |
| 3 | <i>Dalbergia sissoo</i> | Rosewood | inconspicuous green-yellow | | T | 50 | 30 | Su | | | | | sh | India |

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|----|---|---|--|----------------------------|----|-----|-----|----|-------|----|-----|-----|-------|-----------|
| 2 | <i>Dalea bicolor</i> & varieties | Dalea Bicolor | Blue | Fall | S | 6-8 | 5-6 | Su | | | | | | CD |
| 3 | <i>Dalea capitata</i> | Yellow Dalea | Yellow | Spring and Fall | Gc | 1 | 3 | Su | | | | | | Mex. |
| 3 | <i>Dalea frutescens</i> | Black Dalea | Pink, Rose to Purple | Late Fall | S | 4 | 5 | Su | | | | | | CD |
| 2 | <i>Dalea greggii</i> | Trailing Indigo Bush | Pink, Purple | Spring to Summer | Gc | 2 | 9 | Su | | | | | | CD |
| 2 | <i>Dalea pulchra</i> | Indigo Bush | Pink, Purple | Winter, early Spring | S | 6 | 5 | Su | | | | | | SD |
| 3 | <i>Dalea versicolor</i> v. <i>sessilis</i> | Indigo Bush, Dalea | Purple | Fall to early Spring | S | 4 | 5 | Su | | | | | | SD |
| 2 | <i>Dasyliiron acrotiche</i> | Green Desert Spoon | Cream on single erect flower stalk | Summer to Fall | A | 4 | 5 | Su | | | | | | CD |
| 2 | <i>Dasyliiron leiophyllum</i> | Green Desert Spoon | Greenish-yellow on single erect flower stalk | Spring | A | 4 | 6 | Su | | | | | | CD |
| 2 | <i>Dasyliiron quadrangulatum</i> (<i>D.longissimum</i>) | Toothless Desert Spoon | Greenish and White | Late Spring | A | 4 | 5 | Su | | | | | | CD |
| 2 | <i>Dasyliiron texanum</i> | Green Desert Spoon | Creamy White on single erect flower stalk | Late Spring to early Fall | A | 5 | 5 | Su | | | | | | CD |
| 2 | <i>Dasyliiron wheeleri</i> | Soto!, Desert Spoon | Tan on erect stems | Mid to late Summer | A | 4 | 5 | Su | | | | | | SD,CD |
| 2 | <i>Datura wrightii</i> | Sacred Datura, Jimson Weed, Thorn Apple | White | Late- Spring to early Fall | Gc | 3 | 6 | Su | Yes | | | | sh | SD |
| 2 | <i>Dicliptera resupinata</i> | Nauve lucipera | Purple | Spring to Fall | P | 2 | 3 | Su | | | | Yes | | SD,CD |
| 2 | <i>Digitaria californica</i> | Arizona Cottontop | White | Summer to early Fall | Gr | 3 | 1.5 | Su | | a | | | | SD,CD |
| 3 | <i>Dimorphotheca sinuata</i> | African Daisy, Cape Marigold | Orange, White, Yellow | Winter to Spring | An | 0.5 | 0.5 | Wi | | | | | | S. Africa |

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|----|--|--------------------------------|--|-----------------------|-------------|-----|-----|--------|-------|----|-----|-----|-------|------------|
| 2 | Dodonaea viscosa & varieties | Hopbush | Green, inconspicuous | Spring to Fall | S | 15 | 12 | Su | | | | | | SD,CD |
| 2 | Ebenopsis ebano (Pithecellobium flexicaule) | Texas Ebony | Cream White | Late Spring to Fall | T | 30 | 20 | Su | | | | | sh | CD |
| 1 | Echinocactus grusonii | Golden Barrel | Yellow | Summer | C | 3 | 2 | Su | | | | | | Mex. |
| 1 | Echinocereus spp. | Hedgehog, Rainbow Cactus | varies by species, Red, Yellow, Pink, Purple | Spring | C | 2 | 2 | Su | | | | | | CD,SD |
| 1 | Echinopsis spp. & varieties | Easter Lily, Sea Urchin Cactus | Pink (various) | Spring to Summer | C | 2 | 2 | Su | | | | | | S. Amer. |
| 1 | Encelia californica | California Brittlebush (green) | Yellow | Winter to Spring | S | 4 | 4 | Wi | | c | | | sh | So. Calif. |
| 1 | Encelia farinosa | Brittlebush | Yellow | Early Spring | S | 3 | 3 | Wi | | c | | | sh | SD |
| 1 | Ephedra nevadensis | Ephedra, Mormon Tea | Green inconspicuous | Spring | S | 5 | 4 | Su | Yes | | | | | SD |
| 3 | Eragrostis intermedia | Plains Lovegrass | Light Pink, White | Summer to Fall | Gr | 3 | 1 | Su | | a | | | | SD,CD |
| 1 | Eremophila decipiens | Emu Bush | Dark red | Winter to Spring | S | 5 | 5 | Su | | | | | | Austr. |
| 2 | Eremophila hybrid | Summertime Blue | Blue | Spring through Summer | S | 6 | 6 | Su, Wi | | | | | sh | Austr. |
| 2 | Eremophila laanii 'pink beauty' | Emu Bush | Pink | Spring | S | 8 | 8 | Su, Wi | | | | | sh | Austr. |
| 2 | Eremophila maculata 'valentine' | Valentine Emu Bush | Red | Early to late Spring | S | 5 | 6 | | | | | | | Austr. |
| 2 | Ericameria laricifolia & cultivars (happiopapapus laricifolius) | Turpentine Bush | Yellow | Fall | S | 2-3 | 2-3 | Su | | | | | | SD |
| 2 | Eriogeron divergens | Native Fleabane | White to Lavender | Spring to Summer | Gc,An, P | 1 | 2 | Wi | | | | Yes | | SW U.S. |

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|----|---------------------------------------|-----------------------------------|---|-----------------------|----|-----|----|----|-------|----|-----|-----|-------|---------------|
| 2 | Eriogonum fasciculatum v. poliofolium | Flattop Buckwheat | White to Pink | Summer | S | 1.5 | 2 | Wl | | | | | | S. CA, AZ, UT |
| 2 | Eriogonum wrightii | Wright Buckwheat | White to Pink | Summer to early Fall | S | 1.5 | 2 | Wl | | | | | | SD |
| 1 | Eriogonum pulchellum | Fluffgrass | White | Summer and Fall | Gr | .5 | .5 | Su | | a | | | | SD,CD |
| 3 | Eschscholtzia californica | California Poppy | Orange, Pale - yellow, occasionally White | Late-Spring | An | 2 | 2 | Wl | | | | | | SD |
| 3 | Eschscholtzia mexicana | Mexican Gold Poppy | Orange, pale-yellow, occasionally White | Early-Spring | An | 1 | 1 | Wl | | | | | | SD |
| 3 | Eucalyptus camaldulensis | Red River Gum | Yellow inconspicuous | Winter to Spring | T | 120 | 50 | Su | | c | | | | Austr. |
| 2 | Eucalyptus campaspe | Silver Girinlet | inconspicuous | Late Winter to Spring | T | 35 | 25 | Su | | c | | | sh | Austr. |
| 2 | Eucalyptus formanii | Eucalyptus | White | Summer | T | 20 | 20 | Su | | c | | | | Austr. |
| 2 | Eucalyptus leucoxylon (rosea) | White Iron Bark | White, Red | Fall to Winter | T | 40 | 30 | Su | | c | | | | Austr. |
| 2 | Eucalyptus microtheca | Tiny Capsule Eucalyptus, Coolibah | Creamy White inconspicuous | Summer | T | 35 | 35 | Su | | c | | | | Austr. |
| 2 | Eucalyptus papuana | Ghost Gum | White inconspicuous | Summer | T | 40 | 25 | Su | | c | | | sh | Austr. |
| 2 | Eucalyptus polyanthemus | Silver Dollar Gum | Cream-white | Winter | T | 40 | 30 | Su | | c | | | | Austr. |
| 2 | Eucalyptus rudis | Desert Gum | | | T | 100 | 50 | Su | | c | | | | Austr. |
| 2 | Eucalyptus sargentii | Salt River Mallet | Yellow | | T | 40 | 30 | Su | | c | | | sh | Austr. |
| 2 | Eucalyptus spathulata | Swamp Mallee | Cream and Gold | Summer | T | 20 | 20 | Su | | c | | | | Aust |

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|----|-------------------------------------|----------------------------|--|----------------------------------|------|-----|-----|----|-------|----|-----|-----|-------|----------------------|
| 1 | Euphorbia antisyphilitica | Wax Plant, Candellilla | Creamy White - Red centers | Spring and mid Summer | S | 3 | 3 | Su | | | | | | CD |
| 2 | Euphorbia myrsinites | Euphorbia | | | Gc | 1 | 3 | Wl | | | | | | S. Europe, Cnt. Asia |
| 2 | Euphorbia rigida (biglandulosa) | Gopher Plant | Chartreuse | Winter to Spring | A,Sc | 2 | 3 | Wl | Yes | | | Yes | | Africa |
| 2 | Eysenhardtia orthocarpa | Kidneywood | White | Summer | T | 10 | 10 | Su | | | | | | CD, SD |
| 3 | Eysenhardtia texana | Texas Kidneywood | White | Spring to Summer | T | 8 | 8 | Su | | | | | | CD |
| 3 | Feijoa sellowiana | Pineapple Guava | White with red stamens | Spring | T,S | 15 | 15 | Su | | | | | | S. Amer. |
| 1 | Ferocactus spp. | Barrel Cactus | varies by species- Yellow, Red, Orange, Purple | Varies Winter through early Fall | C | 5 | 1.5 | Su | | | | | | SD,CD |
| 1 | Fouquieria columnaris | Boojum | White | Late Summer to early Fall | T,A | 75 | 1 | Wl | | | | | sh | Baja |
| 1 | Fouquieria macdougalii | Mexican Tree Ocotillo | Red | Spring | S,A | 6 | 4 | Su | | | | | t | SD |
| 1 | Fouquieria splendens | Ocotillo | Red | Mid-Spring | A | 15 | 8 | Su | | | | | | SD,CD |
| 3 | Fraxinus greggii | Littleleaf Ash | inconspicuous Green | | T,S | 18 | 15 | Su | | a | | | | CD |
| 2 | Gaillardia aestivalis spp. winkleri | Winkler Gaillardia | | | P | 2 | 3 | Wl | | | | | sh | TX |
| 2 | Gaillardia pinnatifida | Blanket Flower | | Late Spring to early Fall | P | 2 | 2 | Wl | | | | | | SW U.S. |
| 3 | Gaillardia pulchella | Fire Wheel, Blanket Flower | Deep Maroon center with Yellow outside edges | Late Spring to early Fall | An | 1.5 | 1.5 | Wl | | | | | | CD |
| 3 | Gazania rigens & varieties | Gazania | Orange, Yellow, White | Winter to Spring, Fall | Gc | .5 | 2 | Wl | | | | | | Africa |

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|----|---|----------------------------|-------------------|---------------------------|-----|-----|----|--------|-------|----|-----|-----|-------|--------------------|
| 3 | Geijera parviflora | Australian Willow | White | Spring | T | 25 | 20 | Su | | | | | | Austr. |
| 1 | Geoffroea (Gourleia) decorticans | Chilean Palo Verde | Yellow | Spring | T | 20 | 15 | Su | | | | | | S. Amer. |
| 1 | Glandularia gooddingii (Verbena) | Goodding Verbena | Lavender, Pink | Spring | P | 1.5 | 3 | Wi, Sp | | | | | | SD |
| 3 | Glandularia pulchella (V. tenuisecta) (V. tenera) | Moss Verbena, Rock Verbena | Purple | Spring to Fall | P | 1 | 5 | Su, Wi | | | | Yes | | S. Amer. |
| 2 | Gossypium harknessii | Gossypium, Wild Cotton | Yellow | Spring and Fall | S | 3 | 3 | Su | | | | | t | SD |
| 3 | Guaiacum coulteri | Guayacan | Blue-Purple | Spring through Summer | T,S | 12 | 10 | Su | | | | | sh | SD |
| 1 | Gutierrezia sarothrae | Snakeweed | Yellow | Early Fall | S,P | 2 | 2 | Su | | | | Yes | | W. U.S., CAN, Mex. |
| 3 | Hamelia patens | Texas Firecracker Bush | Red, Orange | Summer | S | 10 | 5 | Su | | | | | sh | FL, Caribn. |
| 2 | Havardia mexicana (Pithecellobium mexicanum) | Mexican Ebony | Creamy Yellow | Spring | T | 30 | 30 | Su | | | | | | SD |
| 2 | Havardia pallens (Pithecellobium pallens) | Tenaza | White | Late Spring to Mid-Summer | T | 30 | 12 | Su | | c | | | sh | CD |
| 2 | Hesperaloe campanulata | Bell Flowering Hesperaloe | Pink | Summer | A | 3 | 3 | Su | | | | | | NM |
| 2 | Hesperaloe funifera | Giant Hesperaloe | Creamy White | Summer | A | 5 | 5 | Su | | | | | | CD |
| 2 | Hesperaloe nocturna | Night Flowering Hesperaloe | White and Green | Spring to Fall | A | 3 | 3 | Su | | | | | | SD |
| 2 | Hesperaloe parviflora & varieties | Red Yucca, Yellow Yucca | Pink, Red, Yellow | Spring and Summer | A | 3 | 4 | Su | | | | | | CD |
| 3 | Heteropogon contortus | Tanglehead | Brown | Summer and Fall | Gr | 3 | 2 | Su | | c | Yes | Yes | | SD |

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|----|---|-------------------------------------|---------------------------|---------------------|----|-----|----|----|-------|----|-----|-----|-------|---------------|
| 2 | Hibiscus coulteri | Yellow Hibiscus, Coulter's Hibiscus | Pale Yellow | late Spring to Fall | S | 3 | 3 | Su | | | | | | SD,CD |
| 2 | Hilaria berlanderi | Curly mesquite | Green | late Summer to Fall | Gr | .5 | 1 | Su | | b | | | | SD,CD |
| 2 | Hilaria mutica | Tobosa grass | Green | Summer to Fall | Gr | 2 | 2 | Su | | b | | | | SD,CD |
| 2 | Hilaria rigida | Big galleta grass | Green | Spring through Fall | Gr | 3 | 1 | Su | | b | | | | SD,CD |
| 1 | Hyptis albida (emoryi) | Desert Lavender | Purple | Spring through Fall | S | 8 | 8 | Su | | | | | sh | SD |
| 1 | Jatropha cardiophylla | Limberbush | inconspicuous White | Summer | S | 3 | 4 | Su | | | | | | SD |
| 1 | Jatropha dioica | Jatropha | inconspicuous | Summer | S | 3 | 3 | Su | | | | | t | CD |
| 3 | Juniperus chinensis and cultivars | Juniper | n/a | | T | 20 | 10 | Su | | b | | | | Asia |
| 3 | Juniperus deppeana | Alligator Bark Juniper | inconspicuous | | T | 40 | 30 | Su | | a | | | | SD,CD |
| 3 | Juniperus sabina | Sabine Juniper | inconspicuous | | S | 1.5 | 8 | Su | | b | | | | AZ |
| 2 | Justicia californica and cultivars (Beloperone) | Chuparosa | Red | Spring | S | 3 | 4 | Su | | | | | sh | SD |
| 2 | Justicia candidans | Red Jacobinia | Red, orange | Fall to Spring | S | 5 | 3 | Su | | | | | sh | SD |
| 3 | Justicia fulvicoma | Mexican Plume | Reddish Orange | Spring and Fall | S | 2 | 3 | Su | | | | | t | Mex. |
| 3 | Justicia spicigera | Firecracker Bush | Orange | Summer to Winter | S | 4 | 4 | Su | | | | | sh | Mex. |
| 3 | Lantana camara and cultivars | Bush Lantana | Orange, Yellow, Red, Pink | Spring to Fall | S | 3 | 4 | Su | | | Yes | Yes | t | U.S., Tropics |

| WU | BOTANICAL NAME | COMMON NAME | FLOWER COLOR | BLOOM SEASON | PT | H | W | GS | TOXIC | AL | INV | SCA | HARDY | ORIGIN |
|----|--------------------------------------|-----------------------------|---|-----------------------|------|------|------|----|-------|----|-----|-----|-------|-----------|
| 3 | Lantana montensis | Trailing Lantana | Lavender | Spring to Summer | Gc | 1.5 | 6 | Su | | | | | t | S. Amer. |
| 1 | Larrea tridentata (divaricata) | Creosote Bush, Greasewood | Yellow | Early Spring to Fall | S | 8 | 8 | Su | | | | | | SD,CD |
| 3 | Leptochloa dubia | Green Sprangle-Top | Green | Summer | Gr | 3 | 1 | Su | | a | | | | CD,SD |
| 2 | Leucaena retusa | Golden Leadball | Yellow | Spring to Summer | T | 20 | 15 | Su | | | | | sh | CD |
| 2 | Leucophyllum spp. & varieties | Texas Ranger | varies by species Pink, Purple, Lavender, White | Summer humidity | S | 3-10 | 3-10 | Su | | | | | | CD |
| 3 | Linum grandiflorum 'Rubrum' | Scarlet Flax | Scarlet | Spring | An | 2 | 1 | Wi | | | | | | N. Africa |
| 3 | Linum lewisii | Blue Flax | Bright Blue | Spring | An | 2 | 1 | Wi | | | | | | SD,CD |
| 1 | Lophocereus schotti | Senita | Pink | Spring to Summer | A, C | 15 | 10 | Su | | | | | sh | SD |
| 1 | Lophocereus schotti, ssp. Monstrosus | Totem Pole Cactus | Pink | Spring to Summer | A, C | 10 | 8 | Su | | | | | | Baja |
| 2 | Lotus rigidus | Desert Deerweed, Deer Vetch | Yellow and Orange | Spring | Gc,P | 1.5 | 2 | Wi | | | | | | SD |
| 1 | Lupinus arizonicus | Lupine | Purple | Winter to Spring | An | 1 | 1 | Wi | | | | | | SD |
| 1 | Lupinus sparsiflorus | Desert Lupine | Purple | Late Winter to Spring | An | 1 | 1 | Wi | | | | | | SD |
| 1 | Lupinus succulentus | Arroyo Lupine | Deep Blue | Spring | An | 2 | 1 | Wi | | | | | | SD |
| 2 | Lycium andersonii | Desert Wolfberry | Lavender, followed by Red berries | Spring | S | 6 | 6 | Su | | | | | | SD |
| 1 | Lycium exsertum | Thornbush | White-Purple followed by Red berries | Spring | S | 8 | 8 | Su | | | | | | SD |

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|----|-------------------------|-----------------------------|--|------------------------------------|----------|-----|-----|----|-------|----|-----|-----|-------|--------------|
| 1 | Lycium fremontii | Wolfberry, Tomatillo | White-Lavender followed by Red berries | Spring | S | 10 | 8 | Su | | | | | | SD |
| 2 | Lycium pallidum | Desert Thorn | White, followed by Red berries | Spring | S | 3-9 | 4-6 | Su | | | | | | SD, Mojave D |
| 3 | Lysiloma thomberi | Feather Tree | White | Late Spring | T, S | 20 | 20 | Su | | | Yes | Yes | sh | SD |
| 2 | Macfadyena unguis-cati | Cat's Claw Vine | Yellow | Spring | V | 30 | 30 | Su | | | Yes | Yes | | U.S. |
| 1 | Maireana sedifolia | Pearl Bluebush | Tan inconspicuous | | S | 2 | 3 | | | | | | sh | Austr. |
| 2 | Malephora crocea | Croceum, Ice Plant | Copper to red | Late Fall to late Winter | Gc, Sc | 1 | 6 | Su | | | | | | S. Africa |
| 3 | Malephora lutea | Rocky Point Ice Plant | Yellow | Nearly all year | Gc, P | 8 | 4 | Su | | | | | sh | S. Africa |
| 1 | Mamillaria spp. | Pincushion, Fishhook Cactus | varies by species Cream, Yellow, Red, Pink | Varies by species Spring to Summer | C | 0.5 | 0.5 | Su | | | | | | CD, SD |
| 2 | Maytenus phyllanthoides | Mangle Dulce | Green inconspicuous | | S | 12 | 12 | Su | | | | | | SD, CD |
| 2 | Melampodium leucanthum | Blackfoot Daisy | White | Early Spring to Fall | Gc | 2 | 2 | Su | | | Yes | Yes | | SD, CD |
| 2 | Merremia aurea | Yellow Morning Glory Vine | Yellow | Summer to Fall | V | 25 | 25 | Su | | | | | t | SD |
| 2 | Mimosa dysocarpa | Velvetpod | Pink, White | Summer | S | 6 | 6 | Su | | c | | | | SD |
| 3 | Mirabilis multiflora | Desert Four O'clock | Hot Pink | Summer to early Fall | Gc, P, V | 3 | 4 | Su | | | | | | U.S. |
| 3 | Muhlenbergia capillaris | Regal Mist | Pink | Fall | Gr | 3 | 3 | Su | | | | | | U.S. |
| 3 | Muhlenbergia dumosa | Bamboo Murly | Green dries to tan | Spring to Summer | Gr | 6 | 6 | Su | | a | | | | SD |

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|----|-------------------------------|---------------------------|-------------------------------|---------------------|----|------|------|----|-------|----|-----|-----|-------|--------|
| 2 | Muhlenbergia emersleyi | Bulgrass | Purple dries to tan | Fall | Gr | 4 | 4 | Su | | a | | | | SD |
| 3 | Muhlenbergia lindheimeri | Autumn Glow | Yellow dries to tan | Fall | Gr | 5 | 5 | Su | | a | | | | TX |
| 1 | Muhlenbergia porteri | Bush muhly | Pink | Late Summer to Fall | Gr | 2 | 3 | Su | | a | | | | SD,CD |
| 2 | Muhlenbergia rigens | Deer grass | Tan | Summer to Fall | Gr | 4 | 4 | Su | | a | | | | SD |
| 3 | Muhlenbergia rigida | Purple Muhlenbergia | Purple dries to tan | Late Summer to Fall | Gr | 5 | 3 | Su | | a | | | | SD |
| 3 | Myoporum parvifolium | Purple Myoporum | White | Spring to Summer | Gc | 0.5 | 9 | Su | | | | | | Austr. |
| 3 | Myrtus communis & varieties | True Myrtle, Roman Myrtle | White | Spring | S | 6 | 5 | Su | | | | | | Medit. |
| 3 | Nandina domestica & varieties | Heavenly Bamboo | White followed by Red berries | Spring | S | 6 | 4 | Su | | | | | | Asia |
| 2 | Nassella tenuissima | Mexican Feather Grass | Tan | Fall | Gr | 3 | 1 | Su | | b | | | | CD |
| 2 | Nerium oleander & varieties | Oleander | Pink, White, Red, Salmon | Mid-Spring to Fall | S | 4-20 | 5-12 | Su | Yes | | | | sh | Asia |
| 1 | Nolina beltingii | Belting's Nolina | White | | A | 3 | 6 | Wt | | | | | | Baja |
| 1 | Nolina bigelovii | Beargrass | Cream | Summer | A | 6 | 4 | Su | | | | | | SD |
| 1 | Nolina lindheimeriana | Lindheimer's Nolina | White | | A | 3-4 | 2-3 | Su | | | | | | TX |
| 1 | Nolina matapensis | Tree Beargrass | White | Summer | A | 25 | 6 | Su | | | | | | SD |
| 1 | Nolina microcapa | Beargrass | Greenish White | Summer | A | 3 | 6 | Su | | | | | | SD |

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|----|-------------------------------------|---|----------------|-----------------------------|-------|-------|------|--------|-------|----|-----|-----|-------|----------------|
| 1 | Nolina nelsoni | Blue Nolina | Green | | A | 4-5 | 6-10 | Su | | | | | | Mex. |
| 1 | Nolina parryi | Parry's Beargrass | | | A | 5 | 5 | Su | | | | | | SD |
| 1 | Nolina texana | Bear Grass | White | Late Spring | A | 3 | 3 | Su | | | | | | TX, NM |
| 2 | Oenothera berlandieri (speciosa) | Mexican Evening Primrose | Pink | Spring to Fall | Gc, P | 1 | 3 | Su, Wi | | | Yes | Yes | sh | CD, TX, Mex. |
| 2 | Oenothera caespitosa | White Evening Primrose, Tufted Evening Primrose | White | Spring | Gc, P | 1 | 3 | Wi, Sp | | | | | | W. U.S. |
| 2 | Oenothera stubbei | Chihuahuan Primrose | Yellow | Summer to Fall | Gc, P | 1 | 2 | Su, Wi | | | | | sh | SD, NE Mex. |
| 2 | Olea europaea 'Swan Hill', 'Wilson' | Fruitless non-pollinating Olive | White | Spring | T | 30 | 30 | Su | | | | | | Medit. |
| 1 | Olneya tesota | Desert Ironwood, Tesota | Lavender-Pink | Late Spring to early Summer | T | 30 | 25 | Su | | | | | sh | SD,CD |
| 1 | Opuntia basilaris | Beavertail Prickly Pear | Hot Pink | Mid Spring | C | 2 | 4 | Su | | | | | | SD |
| 1 | Opuntia bigelovii | Teddy Bear Cholla | Green | Early Spring | C | 6 | 3 | Su | | | | | | SD |
| 1 | Opuntia engelmannii | Engelmann's Prickly Pear | Orange, Yellow | Spring | C | 5 | 6 | Su | | | | | | SW, U.S., Mex. |
| 1 | Opuntia ficus-indica | Indian Fig | Yellow | Spring | C | 10-15 | 15 | Su | | | | | sh | Mex. |
| 1 | Opuntia microdasys | Rabbit Ears Prickly Pear | Yellow | Spring | C | 3 | 6 | Su | | | | | | |
| 1 | Opuntia santa rita tubac | Purple Pancake | Yellow | Spring | C | 6 | 4 | Su | | | | | | AZ cultivar |
| 1 | Opuntia turpinii | Pinecone Prickly Pear | Pink | Summer | C | 3 | 1 | Su | | | | | | W. Argentina |

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|----|--|--|---------------------|------------------------|------|----|----|----|-------|----|-----|-----|-------|--------------|
| 1 | Opuntia versicolor | Staghorn Choll | Orange, Red, Yellow | Spring | C | 10 | 6 | Su | | | | | | SD |
| 1 | Opuntia violacea macrocentra | Long Spine Prickly Pear | Yellow, Red | Spring to early Summer | C | 2 | 3 | Su | | | | | | SD |
| 1 | Opuntia violacea 'Santa Rita' | Santa Rita Prickly Pear | Yellow | Spring | C | 4 | 4 | Su | | | | | | AZ |
| 3 | Osteospermum fruticosum | Trailing African Daisy | White, Purple | Winter to Spring | Gc | 1 | 4 | Wf | | c | | | sh | Africa |
| 2 | Pappophorum mucronulatum | Pappusgrass | White | Spring to early Fall | Gr | 3 | 2 | Su | | a | | | | SD |
| 2 | Parkinsonia praecox (Cercidium) | Palo Brea | Yellow | Spring | T | 30 | 25 | Su | | b | | | sh | SD |
| 2 | Parkinsonia florida (Cercidium floridum) | Blue Palo Verde | Yellow | Early Spring | T | 30 | 30 | Su | | b | Yes | Yes | | SD |
| 2 | Parkinsonia hybrid "Desert Museum" | Desert Museum Palo Verde | Yellow | Spring to Summer | T | 30 | 30 | Su | | b | | | | SD,CD |
| 1 | Parkinsonia microphylla (Cercidium microphyllum) | Littleleaf or Foothill Palo Verde | Yellow | Late Spring | T | 20 | 20 | Su | | b | | | | SD |
| 1 | Parkinsonia x sonorae (Cercidium) | Sonoran Palo Verde | Yellow | Spring | T | 20 | 20 | Su | | b | | | | SD |
| 2 | Passiflora foetida | Passion Flower | White, Purple | Summer | V | 10 | 10 | Su | | | Yes | Yes | sh | SD |
| 1 | Pedilanthus macrocarpus | Slipper Flower, Lady's Slipper, Candelilla | Red-Pink | Spring and Fall | A,Sc | 3 | 3 | Su | Yes | | | | | SD |
| 2 | Pennisetum setaceum 'Cupreum' | Purple Fountain Grass | Pink, Purple | Summer | Gr | 4 | 5 | Su | | b | | | | Africa |
| 2 | Penstemon ambiguus | Pink Plains Penstemon | Pink | Summer | P | 3 | 3 | Su | | | | | | W. U.S. |
| 3 | Penstemon amphotellae | | Blue | Late Spring | P | 1 | 2 | Su | | | | | | Central Mex. |

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|----|-----------------------------|--|----------------|-----------------------------|----|---|-----|----|-------|----|-----|-----|-------|------------------|
| 3 | Penstemon baccharifolius | Cutleaf Penstemon | Red-Rose | Summer | P | 2 | 3 | Su | | | | | | CD |
| 3 | Penstemon barbatus | Beardtongue Penstemon | Red | Summer to early Fall | P | 1 | 1 | Wt | | | | | | SD,CD |
| 3 | Penstemon cardinalis | Cardinal Penstemon | Red | Spring, Summer | P | 1 | 1-2 | Wt | | | | | | TX |
| 3 | Penstemon cobaea | Foxglove Penstemon | White-lavender | Spring | P | 1 | 1 | Wt | | | | | | TX? |
| 3 | Penstemon eatoni | Firecracker Penstemon | Red | Late Winter to Early Spring | P | 1 | 1 | Wt | | | | | | SD |
| 3 | Penstemon fendleri | Fendler Penstemon | Violet | Spring through Summer | P | 1 | 1 | Wt | | | | | | OK, AZ, NM |
| 3 | Penstemon grandiflorus | Large Fendler Penstemon | Lavender | Early Summer | P | 1 | 1 | Wt | | | | | | TX |
| 3 | Penstemon palmeri | Palmer Penstemon | White, Pink | Spring through Summer | P | 2 | 2 | Wt | | | | | | SW U.S. |
| 3 | Penstemon parryi | Parry Penstemon | Pink, Red | Early Spring | P | 1 | 1 | Wt | | | Yes | Yes | | SD |
| 3 | Penstemon pinifolius | Pineleaf Penstemon | Red, Orange | Summer | P | 1 | 2 | Su | | | | | | No. AZ, UT |
| 3 | Penstemon pseudospectabilis | Canyon Penstemon, Mohave Beardtongue | Rose-purple | Spring to mid-Summer | P | 1 | 1 | Wt | | | | | | SD |
| 3 | Penstemon spectabilis | Mojave Penstemon, Royal Penstemon | Blue-purple | Spring to mid-Summer | P | 1 | 1 | Wt | | | | | | CA, N. Baja Mex. |
| 3 | Penstemon strictus | Rocky Mountain Penstemon | Blue | Early Summer | P | 1 | 1 | Su | | | | | | W. U.S. |
| | Penstemon subulatus | Little Beardtongue | Red | Spring | P | 1 | 1 | Wt | | | | | | SD |
| 3 | Penstemon superbus | Superb Penstemon, Santa Rita Penstemon | Coral-red | Spring | P | 2 | 2 | Wt | | | | | | CD, SD, N.M. |

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|----|------------------------|---|------------------------------|------------------|----|------|-----|----|-------|----|-----|-----|-------|--------------------|
| 3 | Penstemon triflorus | Hill Country Penstemon | Rose | Early Spring | P | 1 | 1 | Wl | | | | | | TX |
| 3 | Penstemon wrightii | Texas Rose, Wright's Penstemon | Orange- Pink | Spring to Summer | P | 1 | 1 | Wl | | | | | | TX |
| 1 | Pentzia incana | Karoo Bush | Yellow | Spring to Summer | Gc | 1 | 3 | Su | | | Yes | Yes | | S. Africa |
| 2 | Phacelia campanularia | Desert Bluebells, Desert Canterbury Bells | Blue | Early Spring | An | 1 | 1 | Wl | | | | | | SD |
| 2 | Phacelia tanacetifolia | Tansy Phacelia | Blue, Purple | Early Spring | An | 1 | 1 | Wl | | | | | | N. Calif., N. Baja |
| 2 | Phoenix canariensis | Canary Island Date Palm | Cream, White | Summer | T | 60 | 30 | Su | | c | | | | Canary Islands |
| 2 | Phoenix dactylifera | Date Palm | insignificant | Summer | T | 100 | 20 | Su | | c | | | | Asia |
| 3 | Phyla nodiflora | Lippia | White | Summer | Gc | .125 | 0.5 | Su | | | | | sh | Trop. America |
| 2 | Pinus edulis | Piñon Nut Pine | insignificant | | T | 25 | 15 | Su | | c | | | | NM, Calif, AZ |
| 2 | Pinus eldarica | Afghan Pine | insignificant | | T | 50 | 25 | Su | | c | | | | Asia |
| 2 | Pinus halepensis | Aleppo Pine | insignificant | | T | 80 | 60 | Su | | c | | | | Medit. |
| 2 | Pinus monophylla | Singleleaf Piñon Pine | insignificant | | T | 25 | 15 | Su | | c | | | | Mojave D, N. AZ |
| 2 | Pinus pinea | Italian Stone Pine | insignificant | | T | 60 | 50 | Su | | c | | | | Medit. |
| 3 | Pinus roxburghii | Chir Pine | insignificant | | T | 80 | 40 | Su | | c | | | | Asia |
| 2 | Pistacia atlantica | Mt. Atlas Pistache | insignificant greenish white | Early Summer | T | 60 | 50 | Su | | c | | | | Medit. |

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|----|---|---|-------------------------------|-----------------------|-----|-------|-----|--------|-------|----|-----|-----|-------|---------------|
| 3 | <i>Pistacia atlantica</i> x <i>integerima</i> | <i>Pistache</i> hybrid tereb. x <i>integerima</i> | | | T | 30 | 30 | Su | | c | | | t | Medit. x Asia |
| 3 | <i>Pistacia chinensis</i> | Chinese Pistache | Green (Red leaves) Fall color | | T | 60 | 50 | Su | | c | | | | Asia |
| 2 | <i>Pistacia vera</i> | Pistachio | | | T | 30 | 30 | Su | | c | | | t | Asia |
| 2 | <i>Pitosporum phillyraeoides</i> | Willow Pitosporum | Yellow | Spring | T | 20 | 15 | Su | | | | | | Austr. |
| 3 | <i>Pitosporum tobira</i> & cultivars | Mock Orange | White | | S | 6 | 10 | Su | | | | | | Asia |
| 1 | <i>Plantago</i> spp. | Indian Wheat | Cream, White | Spring | An | .25-2 | 0.5 | Wi | | | | | | SD,CD |
| 3 | <i>Pollomintha maderensis</i> | Lavender Spice | Lavender | Spring through Summer | S | 2 | 2 | Su | | | | | | CD |
| 3 | <i>Portulacaria afra</i> | Elephant Food | Pink inconspicuous | rarely blooms in U.S. | Sc | 12 | 12 | Su, Wi | | | | | t | S. Africa |
| 2 | <i>Prosopis</i> hybrid | South American Mesquite | Light Yellow | Spring | T | 40 | 40 | Su | | b | | | | S. Amer. |
| 2 | <i>Prosopis glandulosa</i> & varieties | Texas Honey Mesquite | Creamy Yellow | Spring | T | 30 | 30 | Su | | b | | | | CD |
| 2 | <i>Prosopis pubescens</i> | Screwbean Mesquite | Yellow | Spring | T | 20 | 20 | Su | | b | | | | SD,CD |
| 2 | <i>Prosopis velutina</i> (juiflora) | Velvet Mesquite | Yellow | Spring | T | 30 | 30 | Su | | b | | | | SD |
| 1 | <i>Psilostrophe cooperi</i> | Paper Flower | Yellow | Spring and Summer | P | 2 | 2 | Wi | | | | | | SD,CD |
| 1 | <i>Psilostrophe tagetina</i> | Paper Flower | Yellow | Spring and Summer | P | 2 | 2 | Wi | | | | | | SD,CD |
| 3 | <i>Punica granatum</i> & varieties | Pomegranate | Dark Orange, Red | Summer | T,S | 20 | 15 | Su | | | | | | India |

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|----|-----------------------------|--------------------------------|--|----------------------|-----|----|------|----|-------|----|-----|-----|-------|------------------|
| 3 | Pyracantha & varieties | Pyracantha (red berried types) | White followed by Red berries | Spring | S | 20 | 12 | Su | | | | | | Asia |
| 3 | Quercus arizonica | Arizona White Oak | Green inconspicuous | | T | 60 | 30 | Su | | b | | | | SD,CD |
| 3 | Quercus buckleyi (Q texana) | Texas Red Oak | Green inconspicuous; Red Fall Color | | T | 30 | 30 | Su | | b | | | | W. TX |
| 3 | Quercus emoryi | Emory Oak | Green inconspicuous | | T | 50 | 40 | Su | | b | | | | SD,CD |
| 3 | Quercus fusiformis | Escarpment Live Oak | Green inconspicuous | | T | 50 | 50 | Su | | b | | | | W. TX |
| 3 | Quercus gambelii | Gambel Oak | Green inconspicuous | | T,S | 30 | 15 | Su | | b | | | | SW U.S. |
| 3 | Quercus ilex | Holly Oak | Green inconspicuous | | T | 50 | 50 | Su | | b | | | | Medit. |
| 3 | Quercus muhlenbergia | Chinquapin Oak | Green inconspicuous, Orange and | | T | 30 | 30 | Su | | b | | | | W. TX |
| 3 | Quercus polymorpha | Monterey Oak | Green inconspicuous | | T | 80 | 60 | Su | | b | | | | W. TX |
| 3 | Quercus suber | Cork Oak | Green inconspicuous | | T | 60 | 40 | Su | | b | | | | Medit. |
| 2 | Quercus turbinella | Shrub Live Oak | Green inconspicuous | | S | 10 | 10 | Su | | b | | | | W. U.S. |
| 3 | Quercus virginiana | Live Oak | Green inconspicuous | | T | 50 | 50 | Su | | b | | | | SE U.S. |
| 2 | Rhus microphylla | Littleleaf Sumac | White, Red Fall Color | Spring before leaves | S | 10 | 10 | Su | Yes | c | | | | CD, SD |
| 2 | Rhus ovata | Sugar Bush, Sugar Sumac | Pink & White followed by small red fruit | Spring | S | 15 | 15 | WI | Yes | c | | | | Calif., AZ |
| 2 | Rhus trilobata & varieties | Three Leaf Sumac, Skunk, Bush | inconspicuous, small red fruit, Fall color | Spring | S | 5 | 8-10 | Su | | c | | | | Can., U.S., Mex. |

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|----|---|----------------------------------|---------------------------------|------------------------|--------|-----|-----|----|-------|----|-----|-----|-------|-------------|
| 2 | Rhus virens | Evergreen Sumac | White followed by showy berries | Spring | S | 12 | 12 | Su | Yes | c | | | | CD, SD |
| 3 | Rosa banksiae | Lady Banks Rose, Tombstone Rose | White, Yellow | Spring | S,Gc,V | 20 | 20 | Su | | | | | | China |
| 2 | Rosmarinus officinalis & varieties | Rosemary | Blue | Spring and Fall | S | 3 | 8 | Su | | | | | | Medit. |
| 3 | Ruellia brittoniana & varieties | Dwarf Ruellia | Blue, White | Throughout warm season | Gc | 6 | 12 | Su | | | | | sh | Mex. |
| 2 | Ruellia californica | Sonoran Desert Ruellia | Blue, Purple | Late Spring to Fall | S | 4 | 4 | Su | | | | | sh | SD |
| 2 | Ruellia peninsularis | Baja Ruellia | Blue, purple | Spring to Summer | S | 4 | 4 | Su | | | | | sh | SD |
| 2 | Ruschia uncinatus | Ruschia | Pink | Summer | Gc,Sc | 1.5 | 1.5 | Su | | | | | | S. Africa |
| 2 | Salvia chamaedryoides | Blue Chihuahuan Sage | Cobalt blue | Spring and Fall | S | 2 | 2 | Su | | | | | | CD |
| 2 | Salvia clevelandii | Cleveland Sage | Blue | Late Spring to Summer | S | 5 | 5 | Wf | | | | | | S. CA, Baja |
| 3 | Salvia columbariae | Chia | Blue | Spring | An | .5 | .25 | Wf | | | | | | SD |
| 2 | Salvia dorri v. dorrii | Mojave Sage | Blue-violet | Late Winter and Spring | S | 2 | 2 | Wf | | | | | | MD |
| 3 | Salvia farinacea | Mealy Cup Sage, Texas Violet | Violet, Blue, White | Spring to early Fall | S | 1 | 1 | Su | | | | | | CD |
| 3 | Salvia greggii | Red Chihuahuan Sage, Autumn Sage | Red, Hot Pink, Purple, White | Spring to Summer | S | 3 | 3 | Su | | | | | | CD |
| 2 | Salvia hybrid (S.dorrii x S.clevelandii x S.mojavensis) | Trident, Carl Nielson Sage | Cobalt Blue | Spring | S | 3 | 3 | Wf | | | | | | SD hybrid |
| 3 | Salvia leucantha | Purple Mexican Bush Sage | Purple | Spring to Fall | S | 4 | 4 | Su | | | | | sh | Mex. |

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|----|---|----------------------------|------------------------------|---------------------------|------|-----|----|----|-------|----|-----|-----|-------|----------|
| 2 | Salvia mohavensis | Mohave Sage | Lavender | Spring to mid-Summer | S | 3 | 3 | WI | | | | | | SD, MD |
| 3 | Sambucus nigra spp. Cerulea (S. mexicana) | Mexican Elderberry | Creamy White | Winter and Spring | T | 30 | 20 | WI | | | | | | SD,CD |
| 2 | Santolina chamaecyparissus | Lavender Cotton | Yellow/ silvery foliage | Spring | S,Gc | 2 | 3 | WI | | | | | | Medit. |
| 3 | Santolina virens | Green Santolina | Creamy Yellow | Spring | S,Gc | 2 | 2 | WI | | | | | | Medit. |
| 3 | Sapindus saponaria saponaria | Soapberry | Creamy White | Late Spring | T | 30 | 30 | Su | Yes | | | | sh | Mex. |
| 2 | Sapindus saponaria drummondii | Soapberry | Creamy White | Late Spring | T | 30 | 30 | Su | Yes | | | | | SD,CD |
| 3 | Schinus molle | California Pepper Tree | Yellow-white (insignificant) | Summer | T | 40 | 45 | Su | | b | | | | S. Amer. |
| 2 | Senecio cineraria | Dusty Miller, Silver Plant | Yellow/silvery foliage | Spring | P | 2 | 2 | WI | Yes | | | | | Medit. |
| 1 | Senna covesii (Cassia) | Desert Senna | Yellow | Late Spring to early Fall | P | 1 | 1 | Su | | | | | | SD |
| 2 | Senna lindheimeriana (Cassia) | Senna | Yellow | Summer to Fall | S | 3 | 2 | WI | | | | | sh | CD |
| 1 | Senna purpussi (Cassia) | Baja Senna | Yellow | Winter to Spring | S | 6 | 5 | WI | | | | | sh | Baja |
| 2 | Senna wislizenii (Cassia) | Cassia, Shrubby Senna | Yellow | Summer | S | 8 | 8 | Su | | | | | | SD,CD |
| 2 | Sesuvium verrucosum | Sea Purslane, Ice Plant | Pink | Early Spring to Fall | Gc | 0.5 | 3 | Su | | | | | t | Africa |
| 1 | Simmondsia chinensis & varieties | Joboba, Goat Nut | Green inconspicuous | Spring | S | 8 | 8 | WI | | a | | | | SD |
| 2 | Sophora secundiflora & varieties | Texas Mountain Laurel | Purple to Lavender | Spring | T,S | 25 | 15 | Su | Yes | | | | | CD |

| WU | BOTANICAL NAME | COMMON NAME | FLOWER COLOR | BLOOM SEASON | PT | H | W | GS | TOXIC | AL | INV | SCA | HARDY | ORIGIN |
|----|--|--------------------------------|--------------------------------------|------------------------------|------|-----|-----|--------|-------|----|-----|-----|-------|---------|
| 2 | Sphaeralcea ambigua & varieties | Globe Mallow | Orange, White, Red, Purple, Lavender | Early Spring and Fall | P | 3 | 3 | WI | | | | | | SD |
| 1 | Sporobolus airoides | Alkali Sacaton | White | Summer | Gr | 5 | 3 | Su | | a | | | | SD,CD |
| 1 | Sporobolus contractus | Spike Dropseed | White | Summer to Fall | Gr | 3 | 1 | Su | | a | | | | SD,CD |
| 3 | Sporobolus cryptandrus | Sand Dropseed | White | | Gr | 2 | 1 | Su | | a | | | | SD,CD |
| 2 | Sporobolus flexuosus | Mesa Dropseed | White | Summer to early Fall | Gr | 3 | 1 | Su | | a | | | | SD,CD |
| 3 | Sporobolus wrightii | Big Sacaton | Green | Late Summer to Fall | Gr | 5 | 4 | Su | | a | | | | SD,CD |
| 1 | Stenocereus thurberi (Lemaitreocereus) | Organ Pipe Cactus | White, Purple | Summer | C | 15 | 12 | Su | | | | | t | SD |
| 1 | Stenocereus marginatus (pachycereus) | Mexican Fence Post | Pink or Red outside- whitish inside | Mid-Spring | A, C | 12 | 1 | Su | | | | | sh | Mex. |
| 3 | Tagetes lemmoni | Mountain Marigold | Orange, Yellow | Spring and Fall | P | 3 | 6 | Su | | | | | | SD |
| 2 | Tecoma stans v. angustata | AZ Yellow Bells | Yellow | Late Spring to Fall | S | 10 | 8 | Su | | | | | sh | SD,CD |
| 3 | Tecomaria capensis | Cape Honeysuckle | Orange | Late Fall to Winter | S,V | 8 | 6 | Su | | | | | sh | Africa |
| 2 | Tetraaneuris acaulis (Hymenoxys) | Angellita Daisy | Yellow | All Year, heaviest in Spring | P | 1 | 1 | Su | | | | | | SW U.S. |
| 2 | Teucrium chamaedrys (prostratum) | Prostrate Germander | Lavender | Spring and Summer | Gc | 1 | 2 | Su | Yes | | | | | Medit. |
| 2 | Teucrium fruticans | Bush Germander | Blue or Lavender | Spring to Fall | S | 8 | 8 | Su | | | | | | Medit. |
| 2 | Thymophylla pentachaeta (Dyssodia) | Golden Dyssodia, Golden Fleece | Yellow | Late Spring to Fall | Gc | 0.5 | 0.5 | Su, WI | | | | | | SD,CD |

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|----|-------------------------------------|----------------------------|---|--|------|------|-----|--------|-------|----|-----|-----|-------|---------------------|
| 2 | Thymophylla acerosa (Dyssodia) | Scrubby Dogweed | Yellow | Late Spring to early Fall | Gc | .5 | .5 | Su | | | | | | SD,CD |
| 2 | Trichloris crinita | Two-feather Trichloris | White dries to Tan - reddish highlights | Late Spring to Fall | Gr | 3 | 1 | Su | | a | | | | SD,CD |
| 2 | Trichocereus & varieties | Trichocereus Cactus | White, Yellow, Orange, Red | Varies by variety Spring, Summer, Fall | C | 1-15 | 1-5 | Su | | | | | | S. Amer., Argentina |
| 2 | Tridens muticus | Slim Tridens | White | Spring to Fall | Gr | 1.5 | 0.5 | Su | | b | | | | SD,CD |
| 2 | Trixis californica | Trixis | Yellow | Spring | S | 3.5 | 3.5 | Su | | | | | sh | CA to TX |
| 3 | Ungnadia speciosa | Mexican Buckeye | Rose-pink | Spring | T | 12 | 12 | Su | | | | | | CD |
| 2 | Vauquelinia californica & varieties | Arizona Rosewood | White | Spring to Summer | T,S | 25 | 15 | Su | | | | | | SD |
| 2 | Vauquelinia corymbosa & varieties | Mexican Rosewood | White inconspicuous | Spring | S | 15 | 20 | Su | | | | | | TX, Mex. |
| 3 | Verbena peruviana | Peruvian Verbena | Pink, Blue, Purple | Spring to Fall | P | 0.2 | 3 | Su | | | | | | S. Amer. |
| 3 | Verbena rigida | Sandpaper Verbena | Purple | Summer to Fall | Gc,P | 2 | 4 | Su | | | | Yes | | S. Amer. |
| 3 | Verbena tenuisecta 'Edith' | Moss Verbena | Lavender, Purple | Spring | Gc P | 1-2 | 4-5 | Su, Wi | | | | Yes | | S. Amer. |
| 2 | Verbesina encelioides | Crown Beard | Yellow | Spring | An | 3 | 3 | Wi | | | | Yes | | SD,CD |
| 2 | Viguiera parishii (V deltoidea) | Goldeneye | Yellow | Spring, Late Summer | P | 3 | 3 | Wi, Su | | | | | | SD |
| 3 | Viguiera stenoloba | Skeleton-leaf Goldeneye | Yellow | Summer to Fall | S | 4-6 | 3-4 | Su | | | | | sh | TX, NM, No. Mex. |
| 2 | Vitex agnus-castus | Chaste Tree, Monk's Pepper | Blue | Summer to Fall | T,S | 25 | 25 | Su | | | | | | Medit. |

| WU | BOTANICAL NAME | COMMON NAME | FLOWER COLOR | BLOOM SEASON | PT | H | W | GS | TOXIC | AL | INV | SCA | HARDY | ORIGIN |
|----|---|-------------------------------|----------------|-----------------------------|-----|------|-----|----|-------|----|-----|-----|-------|---------------------|
| 2 | Washingtonia filifera | California Fan Palm | Cream | Summer | T | 45 | 15 | Su | | c | | Yes | | SD |
| 2 | Washingtonia robusta | Mexican Fan Palm | Cream | Summer | T | 75 | 10 | Su | | c | | Yes | sh | SD |
| 3 | Wedelia texana and cultivars (Zexmenia hispida) | Rough Zexmenia, Devil's River | Orange, Yellow | Spring through Fall | S | 2-3 | 2-4 | Su | | | | Yes | sh | SW U.S., TX |
| 3 | Xylosma congestum | Xylosma | insignificant | Spring | T,S | 15 | 15 | Su | | | | | | China |
| 2 | Yucca aloifolia | Spanish Bayonet Yucca | White | Spring to Summer | A | 10 | 5 | Su | | | | | | SD |
| 1 | Yucca baccata | Banana Yucca | White | Late Spring to Summer | A | 3 | 5 | Su | | | | | | SD,CD |
| 2 | Yucca baileyi | | White | Summer | A | 4 | 2 | Su | | | | | | CO, UT |
| 1 | Yucca brevifolia | Joshua Tree | White, Green | Late Winter to early Spring | A | 20 | 20 | Wi | | | | | | S. Calif, S.W. Utah |
| 2 | Yucca constricta | Buckley Yucca | White | Spring through Summer | A | 5 | 5 | Su | | | | | | TX |
| 2 | Yucca elata | Soaptree Yucca | White | Late Spring to Summer | A | 20 | 8 | Su | | | | | | SD,CD |
| 2 | Yucca faxoniana (Y carerosana) | Giant Dagger Yucca | White | Summer | A | 15 | 4 | Su | | | | | | CD |
| 2 | Yucca filifera (australis) | St. Peter's Palm | White | | A | 2.5 | 4 | Su | | | | | | Mex. |
| 2 | Yucca glauca | Soapweed Yucca | White | Summer | A | 3 | 3 | Su | | | | | | U.S. |
| 2 | Yucca harrinariae | Harriman's Yucca | White | Mid-Summer | A | 6-22 | 18 | Su | | | | | | SW U.S. |
| 2 | Yucca pallida | Paleleaf Yucca | White | Late Spring | A | 2 | 2 | Su | | | | | | TX |

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|----|-------------------------------------|-----------------------------|--------------------------------------|---------------------|------|------|-----|----|-------|----|-----|-----|-------|------------------|
| 2 | Yucca rigida | Mexican Blue Dagger Yucca | White | Summer | A | 12 | 5 | Su | | | | | | CD |
| 2 | Yucca rostrata | Beaked Yucca | White | Summer | A | 12 | 9 | Su | | | | | | CD |
| 2 | Yucca schidigera | Mojave Yucca | White | Spring | A | 9-15 | 4-6 | Su | | | | | | W. U.S., Mex. |
| 2 | Yucca schottii | Mountain Yucca | White | Early Summer | A | 15 | 4 | Su | | | | | | SD |
| 2 | Yucca thompsoniana | Thompson Yucca | White | Early Summer | A | 10 | 5 | Su | | | | | | SW TX |
| 2 | Yucca torreyi | Torrey's Yucca | White | Spring | A | 8-15 | 6 | Su | | | | | | TX, NM, No. Mex. |
| 1 | Yucca treculeana | Spanish Dagger, Palma Pita | White | Spring | A | 20 | ? | Su | | | | | | CD, W. TX |
| 1 | Yucca whipplei | Our Lord's Candle | White & Purple | Once (Early-Spring) | A | 3 | 6 | Su | | | | | | SD |
| 3 | Zauschneria californica & varieties | Hummingbird Trumpet | Red, Orange | Summer and Fall | Gc | 2 | 2 | Su | | | | | | SD |
| 3 | Zephyranthes spp. & varieties | Rain Lily | varies by species- White, Rose, Pink | Summer | Gc,P | 1 | 1.5 | Su | | | | | | S. Africa |
| 1 | Zinnia acerosa | Desert Zinnia | White-orange centers | Late Spring to Fall | P | 1 | 1 | Su | | | | | | SD,CD |
| 2 | Zinnia grandiflora | Prairie Zinnia | Yellow, Orange | Summer to Fall | P | 1 | 1 | Su | | | | | | SE, AZ, NM |
| 2 | Zizyphus jujuba | Chinese Date, Common Jujube | Yellow-white | Spring | T | 40 | 30 | Su | | | | Yes | | Asia |