

Water Town Hall
February 28, 2017



The King's Deer Water Issue

- We have all invested significantly in our properties
 - Our water allocations are <60% of the area standard
 - Some of us are exceeding our present allocations
 - And, the State scores us relative to our allocations!
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- Adequate water secures our property values
 - The good news: There's a way to buy more water

About this meeting ...

- Informational and feedback only – no decisions, no votes
- Quick slide presentation – please hold questions
- Q&A –
 - Backup slides for more detail
 - Let's all stay on topic – water issue only
 - We'll be done by 9:00pm

Slide Presentation

- Background
- The Water Resource Committee
- How much water are we using?
- How much water do we need?
- Buying more water

Background

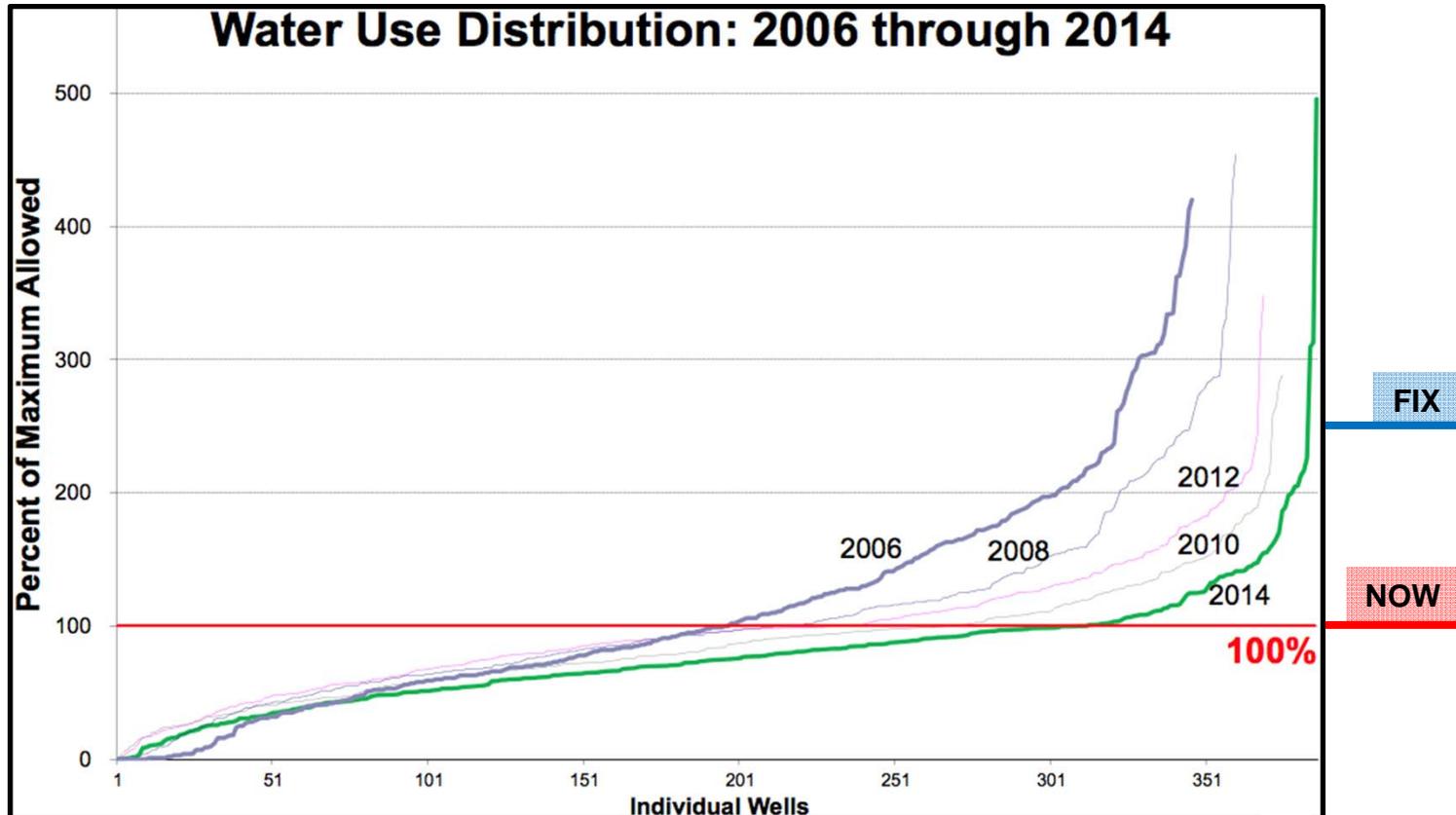
- 9/2016: BOD created the Water Resource Committee (WRC)
- WRC Charter
 - Explore opportunities to buy more water
 - All owners must have equal opportunity to buy water
 - Agreement must address water augmentation by HOA
 - No cost impact on the HOA
 - No cost impact on those who don't want to buy

Water Resource Committee

- Dan Rivers, Chairman, Director (VP)
- Allen Alchian, Vice Chairman, Advisor to the BOD
- Steve Shurgot, Director
- Lorrie Kresge
- Kris Salo
- Derek Araje
- Frank John

How much water are we using?

- Typically, 25% of owners exceed their allocations
- In drought years (e.g.) it may go as high as 40%
- The State gets serious if we top the decreed total



How much water do we need?

- Douglas County Zoning Resolution (2.5-5.0 acres)
1.00 acre-feet/year/residence
- Average Dawson aquifer decreed well, big and small *
0.72 acre-feet/year/residence
- Donala Water-Sanitation District (quarter-acre residence)
0.61 acre-feet/year/residence
- WRC calculation for family of 5 (based on State guideline)
0.59 acre-feet/year/residence
- King's Deer: Classic ('93 decree)/Highlands ('94 decree)
0.38/0.42 acre-feet/year/residence

WRC Recommendation
0.60-0.75 acre-feet/year/residence

* *Dave Diedrich, Deputy Water Commissioner, Division 2, District 10, State of Colorado*

Buying additional water rights

- Closest source: The King's Deer developers
- Rights held in Palmer Divide Water Company (PDWC)
- WRC has met with the PDWC manager (Dan Potter)
- WRC has proposed a KD-PDWC Agreement
- BOD has reviewed it and has consulted legal counsel
- We wanted to hear your opinions before proceeding

Getting to a new water decree

- KD and PDWC sign the final Agreement to cooperate
- PDWC drafts an application, KD reviews/agrees
- PDWC drafts a new decree, KD reviews/agrees
- Typical time to get a water court decree: 6-8 months

Selling water to KD lot owners*

- PDWC is proposing to bring all KD buyers (whether in Classic or in Highlands) up to a full acre-foot for 100 years for \$5,500 plus a \$450 admin fee
- Defined Purchase Period for KD owners to commit
- Buyers must execute KD and PDWC agreements
- Cut own deal with PDWC after the Purchase Period

*The HOA is a facilitator and takes no official position.
The decision whether or not to buy is the lot owner's.*

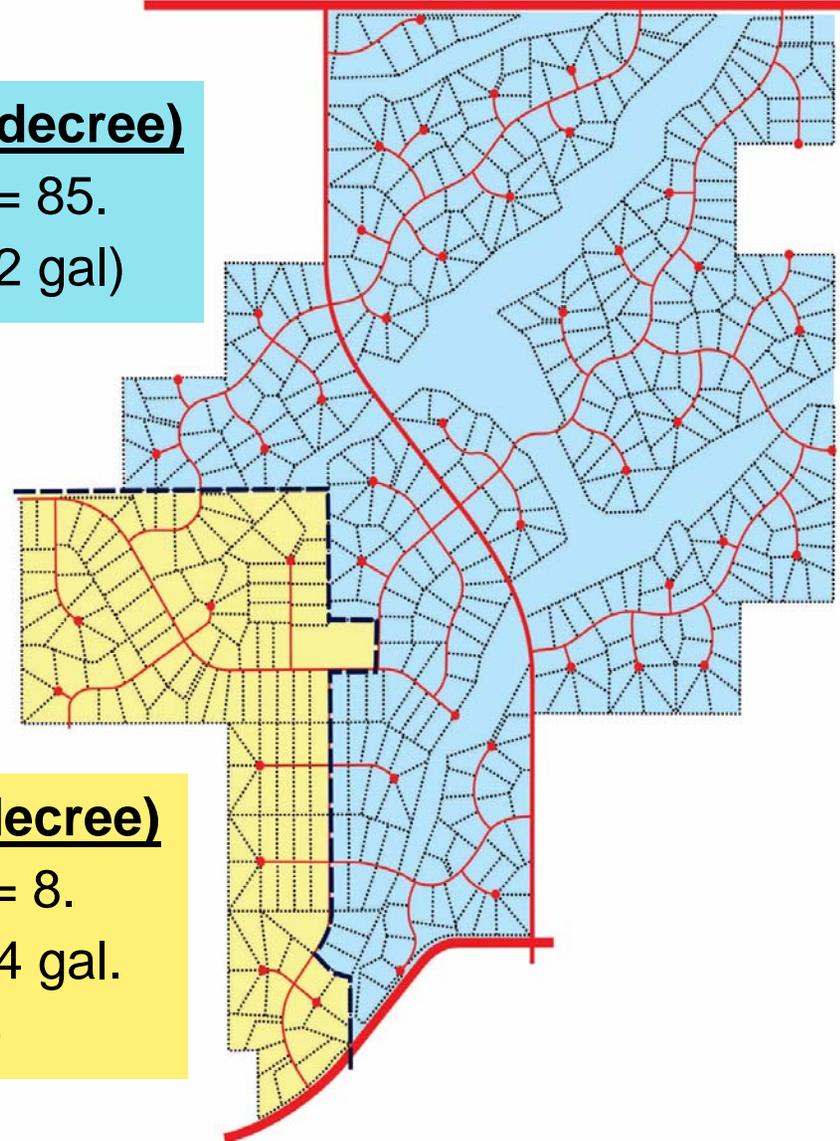
** Terms and Memorandum of Understanding subject to BOD approval*

Backup Slides

KD Water Decree Boundaries

“Highlands Water” (Blue, ‘94 decree)

- Number of lots = 413, vacant = 85.
- Allocation = 0.42 AF = 136,532 gal)



“Classic Water” (Yellow, ‘93 decree)

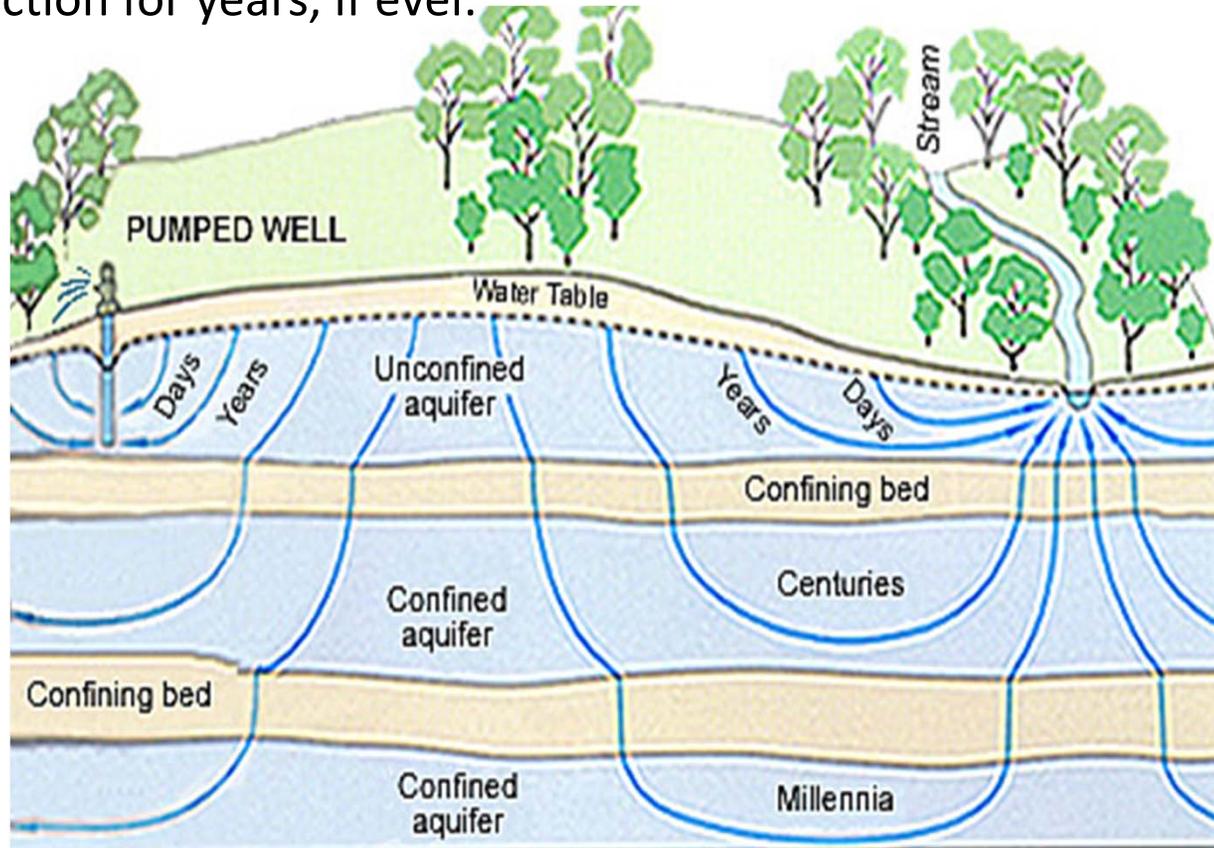
- Number of lots = 118, vacant = 8.
- Allocation = 0.38 AF = 123,824 gal.
- Close to exceeding aggregate

The Unconfined Dawson Is Healthy

“The Dawson Aquifer is recharged from irrigation and precipitation”

Source: Colorado Foundation for Water Education

The Dawson is unconfined. It remains steady or shows water level increases in some areas. Owners with wells in those locations may not observe any decreases in well production for years, if ever.



Courtesy of U.S. Geological Survey

What is an “Unconfined Aquifer?”

A groundwater **aquifer** is said to be **unconfined** when its upper surface (water table) is open to the atmosphere through permeable material.

The **Dawson** is an **entirely unconfined aquifer** and is composed of conglomerates (individual stones that have become cemented together) and coarse-grained sandstones with minor amounts of interbedded clay and clay shale.

According to the **Colorado Foundation for Water Education**, “the shallower Dawson and Denver Aquifers which are more easily recharged from irrigation and precipitation, remain steady or show water level increases in some areas. Homeowners with wells in those locations may not observe any decreases in well production for years, if ever.” Note: State and Douglas County officials agree with this position.

KD draws just 0.5% of the Dawson

The Dawson is entirely unconfined*

Conglomerate, coarse-grained sandstone -
it's renewable (typically in days/years)

There are a total of 19,000 residential
and commercial wells

Annual draw = 30,000 acre-feet (AF)

Kings Deer** takes very little

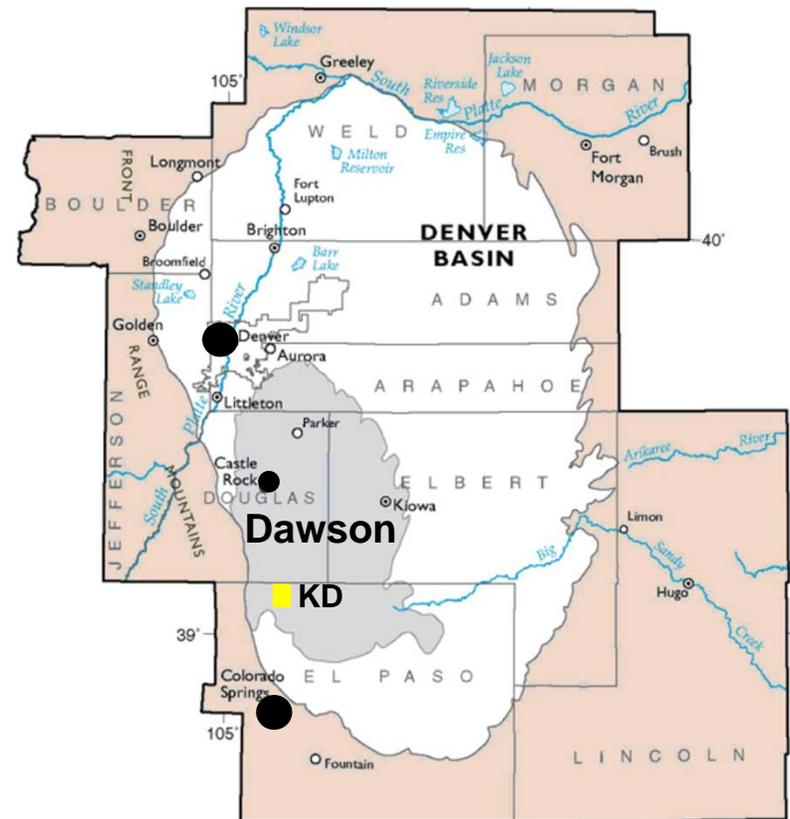
All residential wells (440 total) -
just 2.3% of total Dawson wells

Annual draw (2015) = 145 AF -
just 0.5% of Dawson

* It recharges relatively quickly. See separate slide.

** KDGC is authorized 65 AF/year combined from its 2 wells

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What is water augmentation?

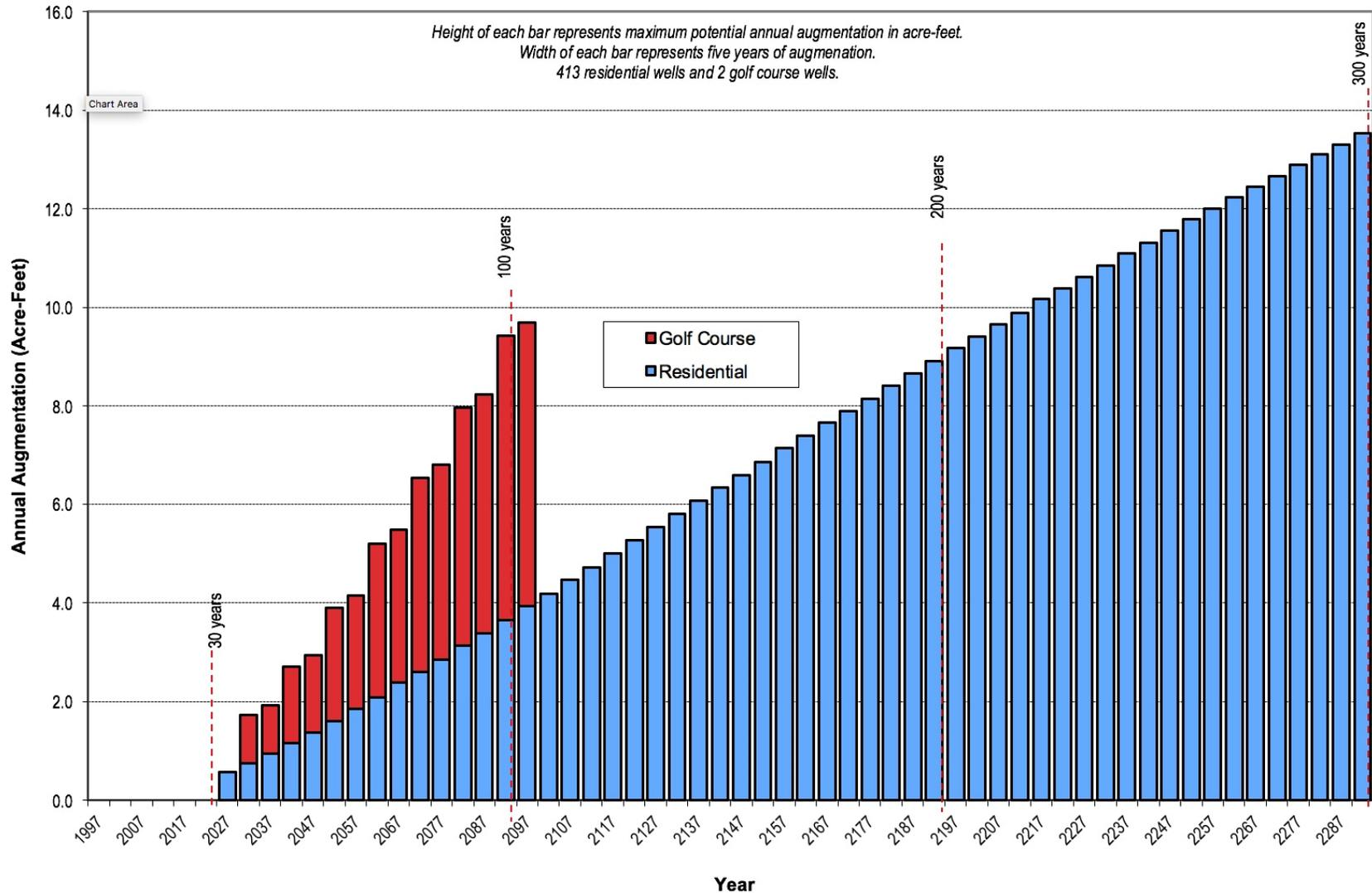
- Intended to replace water that escapes the area
- The water is spilt on the ground per the Court's decree
- KD augments only to the south
- No current augmentation to the north
- If we buy more water, we'll have to augment more
- KD pays Woodmoor Water & Sanitation District (WWSD)
 - About \$3,000/year for 1.1 AF (300,000 gals) of water
 - WWSD sends the water down Dirty Woman Creek
 - WWSD is prepared to augment indefinitely for KD

The KD Water Augmentation Study

- Done by Lytle Water Solutions, LLC in June, 2013
- Proposed deep pumping (from aquifers below Dawson)
- KD HOA has rights to sufficient deep water
- Higher rates of augmentation may be needed in 2027
- BOD is reviewing options for long-term augmentation
WWSD should be able to handle the next 50-100 years
- Purchases of “new water” should have minimal impact

KD Augmentation Requirements

94 and 07 Augmentation Plans
Maximum Potential Annual Augmentation During Pumping (Acre-Feet/Yr)



Water allocations by neighborhood

	Neighborhood	Acre-Feet / year	Gallons / year	Comments
1	Kings Deer Classic (118 lots)	0.38	123,823	
2	Bent Tree (36 lots)	0.38	124,801	Only 36 lots in Bent Tree are metered and tracked. 2000 sq ft irrigation
3	Cherry Creek Crossing (125 lots)	0.39	127,082	
4	Kings Deer Highlands (413 lots)	0.42	136,532	
5	Cathedral Pines (161 lots)	0.44	143,700	Original 161 lots
6	Bent Tree (221 lots)	0.45	146,307	Lots not metered. Report of landscaped area required.
7	New Breed Ranch (94 lots)	0.46	149,891	
8	Walden Preserve	0.47	153,149	
9	Hawk Ridge (125 lots)	0.50	162,926	
10	High Forest Ranch	0.50	162,926	
11	Settler's Ranch	0.55	179,218	.3 household + .2 for 3500 sq ft irrigation + .05 for 4 domestic animals
12	Highland Park (160 lots)	0.56	182,477	
13	Forest Gate (60 lots)	0.60	195,510	
14	Flying Horse at Shamrock	0.70	228,096	
15	Cathedral Pines (48 of 161 lots)	0.84	274,040	Supplemental for 48 of 161 original lots
16	Cherry Creek Springs (125 lots)	1.00	325,851	
17	Cathedral Pines (9 of 161 lots)	1.24	404,381	Supplemental for 9 of 161 original lots