













forecast project 5,760 new housing units between 2017-2050 for an average of approximately 175 units per year. Based on the historic trends and available site within the City, the following unit mix was assumed:

- 8 single family units/year (based on average single-family development in city between 2010-2019)
- 109 multi-family units/year (65% of residential units that are not single family)
- 58 accessory dwelling units/year (35% of residential units that are not single family)
- Land uses and growth are not expected to vary substantially since the growth rate is relatively low and there is limited space remaining for substantial growth within the City’s service area.
- The State has proposed to update the state’s long-term housing goals, known as Regional Housing Needs Allocation. Through this effort, California Department of Housing and Community Development will establish new, higher short-term statewide housing goals for jurisdictions, including the City. The City is currently evaluating the potential impacts of these requirements on land use and population projections. The City will not be completed with this analysis before demand projections are set for Water Vision Santa Barbara. Therefore, we have assumed a growth rate 30% higher than the baseline, equivalent to 227 unit/year and the following unit mix:
  - 8 single family units/year
  - 142 multi-family units/year
  - 77 accessory dwelling units/year
- **Employment Projections:** The non-residential component of the baseline projection is based on employment projections from the California Employment Development Department<sup>1</sup>. Job growth that is slower or faster than the baseline projections would reduce or increase demand projections, respectively. To account for the uncertainty in the employment projections, a range of +20% and -20% growth compared with the baseline is proposed.
- **Drought Rebound:** The baseline projection assumes that demand will return (or “rebound”) to 90% of levels prior to drought restrictions (2008-2013 average) by 2027 based on reviews of several demand scenarios with City staff and considering City’s customers response to previous droughts. After accounting for population and employment growth combined with savings from conservation measures implemented since 2013, planned conservation measures (City’s conservation program), and passive conservation (plumbing code enforcement), the rebound is equivalent to approximately 83% of levels prior to drought restrictions (2008-2013 average).

There are two variables to consider for the drought rebound – the target value and the timing:

- Target Value: Permanent conservation measures, such as turf removal, may result in a lower rebound than experienced after previous droughts. Therefore, the baseline projection could be lower, but empirical data is not available to estimate this potential impact at this time. The “envelope” could consider that demand will return to 80% of levels prior to drought restrictions rather than 90%.
- Timing: The timing of the rebound will likely be slower due to the developing COVID-19 recession since economic activity has slowed and the recovery period is uncertain. Delaying the projected

---

<sup>1</sup> EDD April 2019 report for 2016 – 2016 jobs growth of 12.5% (1.2% annual growth) for the Santa Maria-Santa Barbara Metropolitan Statistical Area applied to demand projections starting in 2019.

year for rebound would reduce near-term demands but would have minimal impact on long-term demands (in 2050). Therefore, rebound timing is not included in the demand envelope.

- **Uncertain New Conservation Program Response:** The baseline projection assumes implementation of a conservation program that results in over 800 AFY of demand reduction by 2035 or roughly a 6% decrease beyond passive conservation savings from plumbing code changes. Though not experienced to date, there is a chance that the community may not embrace additional conservations measures, which would result in demand that is 6% higher than baseline projections.

The following item is a risk to the baseline demand projections that is expected to have *temporary* impacts the demand projection. Therefore, it is included as a Resilience Scenario but not included in the demand “envelope”:

- **Economic Recession:** The reduced demands from an economic recession are assumed to be temporary and are not considered as part of the baseline projection for long-term supply planning purposes. However, they will be included as a Resilience Scenario.

The following items are risks or uncertainties to the baseline demand projections that are not expected to substantially impact the demand projection and, therefore, are not included in an “envelope”:

- **Response to Rate Changes / Rate Sensitivity:** The City has volumetric tiered rates and water budgets for irrigation accounts. While there is a known demand response elasticity to increased rates, it is assumed that the City’s historical and projected rate structure will result in a stable response to standard rate changes over time as needed to accommodate the City’s costs for treatment and distribution.
- **New State Water Use Efficiency Requirements:** The Conservation Plan accounts for existing requirements set by SB X7-7 and sets up the City to comply with SB 606 and AB 1668 as described in Section 2. SB 606 and AB 1668 water use efficiency standards and compliance are not fully developed at this time and will be reviewed in the 2024 UWMP Supplement and 2025 UWMP.

### 3.2. Demand Projection Envelope Variables

Based on the rationale described above, demand projections that include the following variables were combined to form a demand envelope for portfolio evaluation:<sup>2</sup>

- **Population Projections:** Assumes population growth at a 30% higher rate than current regional growth projections
- **Employment Projections:** Assumes employment projections are 20% higher and 20% lower than the baseline projection
- **Lower Drought Rebound:** Assume a rebound to 80% of pre-drought demand rather than the baseline assumption of 90% of pre-drought demand
- **Lower and Slower Drought Rebound:** Assumes lower drought rebound (80%) and 10-year recovery period instead of the baseline 7-year recovery period.

As shown in **Figure 5**, population projections have minimal impact on demand in 2050, employment projections have moderate impact, and drought rebound assumptions have a large impact. The low impact from population growth assumptions is due to almost all new residents are assumed to housed in multi-family units or accessory dwelling units, which have a relatively low per capita water use. Employment projections have a moderate impact

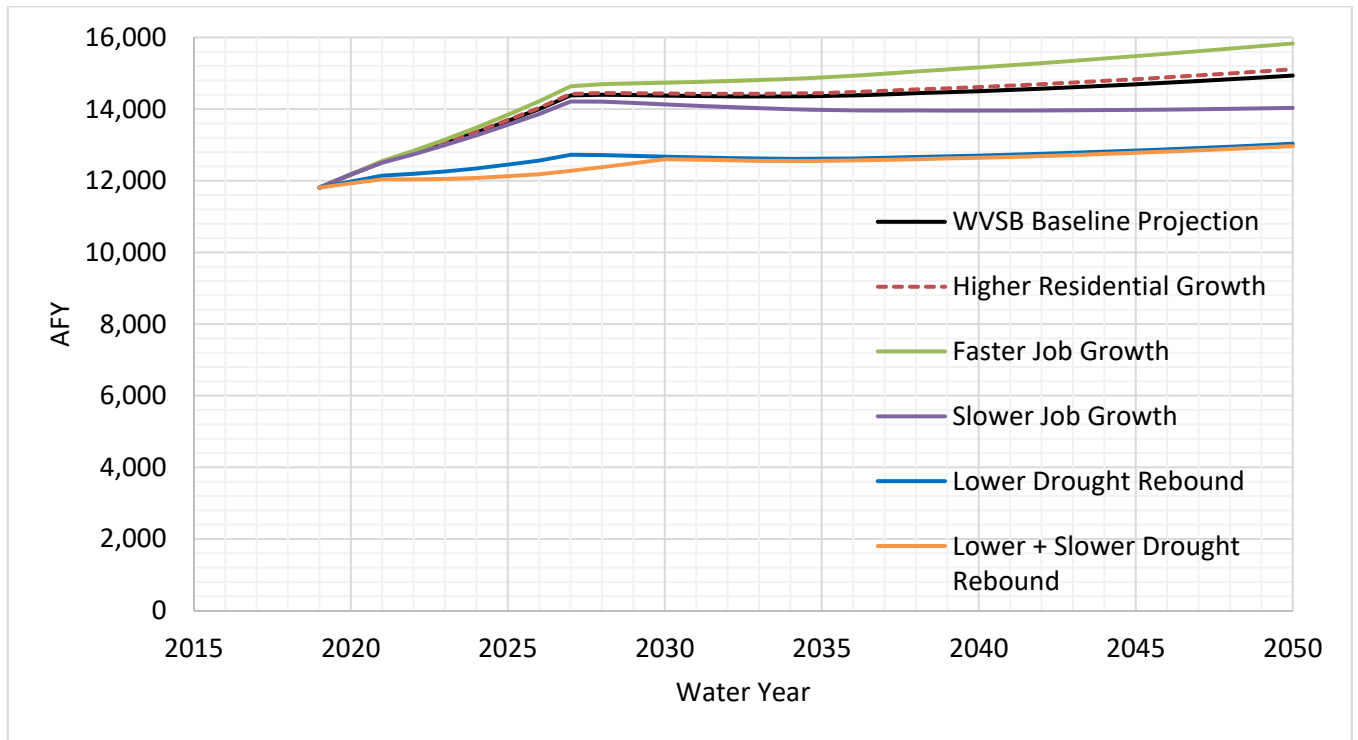
---

<sup>2</sup> As noted in Section 3.1, the “economic recession” risk was not included in the demand envelope since it is a temporary condition over the 30-year projections but will be included as a Resilience Scenario for future portfolio evaluation.



(roughly 6% change to baseline) since it translates to increased commercial and industrial activity, such as hotels and restaurants, and its associated water use. The variable with the largest demand projection impact (roughly 13% decrease) is the water use of existing customers and the extent to which their use increases as the area emerges from drought conditions and the strong conservation messaging from media, peers, and others subsides. The assumption represents a difference of roughly 1,700 AFY by 2030 and 1,900 AFY by 2050. Note that a slower rebound would result in a slightly lower demand in the near-term but has little impact in the long-term.

**Figure 5. Water Vision Santa Bara Demand Projection Envelope (2019-2050)**



Based on the clear impact of the drought rebound variable, the City plans to continue to proactively track customer water use and WWSB recommendations will ultimately include an adaptive management strategy that will adjust based on the extent of the demand rebound.

#### 4. References

1. **Maddaus Water Management.** *City of Santa Barbara DRAFT Water Conservation Strategic Plan.* March 31, 2020.
2. **Santa Barbara County Association of Governments.** *Regional Growth Forecast 2050 Santa Barbara County.* 2019.

DRAFT