# LOWER SANTA CRUZ RIVER BASIN STUDY

# SUPPLY - DEMAND SCENARIOS

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PROJECT TEAM MEETING #8

APRIL 2, 2018

# CLIMATE SCENARIOS
# PROJECT TEAM: NOVEMBER 2016

| *Worst Case* Climate Change Scenario | *Best Case* Climate Change Scenario | *Base Case* Scenario |
| --- | --- | --- |
| • Uses Higher Emissions<br>• Based on RCP 8.5 Emissions | • Uses Lower Emissions<br>• Based on RCP 4.5 Emissions | • No Climate Change<br>• Distinguishes the Effect of Climate Change from Other Driving Forces |

# DRAFT GROWTH SCENARIOS
# PROJECT TEAM: APRIL 2017

| Scenario Description | Official/Baseline Values | Slow Compact Growth | Slow Outward Growth | Rapid Outward Growth | Rapid Outward Growth Plus Mining without Replenishment |
|---|---|---|---|---|---|
| **Demand Scenarios Summary** | Growth rate: Medium series from ADOA<br>Growth pattern: PAG<br>CAP-SAM: standard assumptions | Growth rate: Low series from ADOA<br>CAP-SAM: Condensed growth pattern<br>No additional mines Green Valley area eliminates overdraft | Growth rate: Medium series from ADOA<br>CAP:SAM Outward growth pattern<br>Expected mine development with replenishment in Green Valley | Growth rate: High series from ADOA<br>CAP:SAM Outward growth pattern<br>Expected mine development with replenishment in Green Valley | Growth rate: High series from DOA<br>CAP:SAM Outward growth pattern<br>Mining growth w/o replenishment in Green Valley |
| **Population Growth Rate** | Medium | Low Series | Medium Series | High Series | High Series |
| **Growth Pattern - Infill vs. Outward Growth** | Baseline | In-Fill/Redevelopment | Slow Outward | Rapid Outward | Rapid Outward |

# PROPOSED CLIMATE-GROWTH COMBINATIONS PROJECT TEAM: JANUARY 2018

| | | Growth | | | | | Climate | | |
|---|---|---|---|---|---|---|---|---|---|
| Risk | Scenario | Official-Baseline Values | Slow Compact Growth | Slow Outward Growth | Rapid Outward Growth | Rapid Outward Growth + No Mining Replenishment | Base Case | Best Case (RCP 4.5) | Worse Case (RCP 8.5) |
| Lower Risk ----------->Higher Risk | 1 | X | | | | | X | | |
| | 2 | | X | | | | | X | |
| | 3 | | | X | | | | X | |
| | 4 | | X | | | | | | X |
| | 5 | | | | X | | | | X |
| | 6 | | | | | X | | | X |

# PROPOSED SUPPLY-DEMAND SCENARIOS STAKEHOLDER ADVISORS: FEBRUARY 2018

Supply

| | | | | | |
|---|---|---|---|---|---|
| "Worse Case" (Higher Emissions Future - RCP 8.5) | | X | X | X | X |
| "Best Case" (Lower Emissions Future - RCP 4.5) | | X | | | |
| "Base Case" (Current Climate) | X | | | | |
| | Baseline Growth | Slow Compact Growth | Slow Outward Growth | Rapid Outward Growth | Rapid Outward Growth, No Replenishment of Future Mine Pumping |

Demand

# SUMMARY OF STAKEHOLDER ADVISORS RECOMMENDATIONS: FEBRUARY 2018

- Eliminate Rapid Outward Growth with Future Mine Replenishment Scenario
- Keep Baseline Growth Scenario and Rename it *Official Projections*
- Relocate *Official Projections* to Middle Column
- Add a Scenario Combining *Official Projections* with *Worse Case* Climate Future
- Eliminate Slow Outward Growth Scenario

# STAKEHOLDER ADVISORS RECOMMENDED SCENARIOS: FEBRUARY 2018

A Official Projections - Medium, mixed-density growth and Current Climate

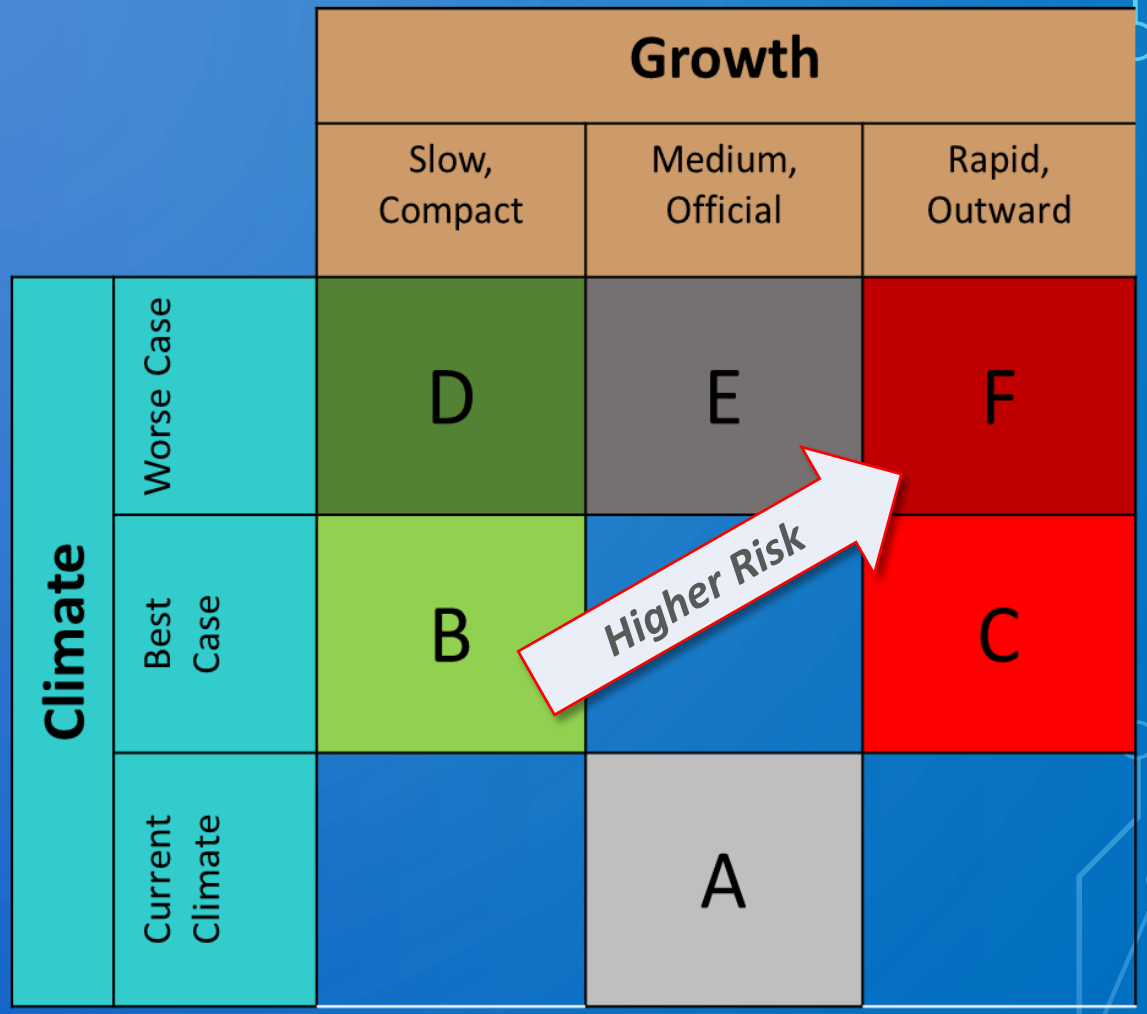
B Slow, compact growth and *Best Case* Climate

C Rapid, outward growth, no mining replenishment and *Best Case* climate

D Slow, compact growth and *Worse Case* climate

E Medium, mixed-density growth and *Worse Case* climate

F Rapid, outward growth, no mining replenishment and *Worse Case* climate



COMMENTS

INPUT

SUGGESTIONS