

# NM Spaceport Authority

## Status brief for the Economic Development and Policy Committee

At Spaceport America | October 14, 2022

Scott McLaughlin, Executive Director



SA Cup 2022, New Mexico Universities

**SPACEPORT AMERICA**

THE SPACE TO BE...

- Recent Activity
- Budget Review
- Capital Improvements
- Business Development



# RECENT ACTIVITY



# REVIEW OF SPACEPORT FACILITIES AND OPERATIONS



## Horizontal Launch Area (HLA)

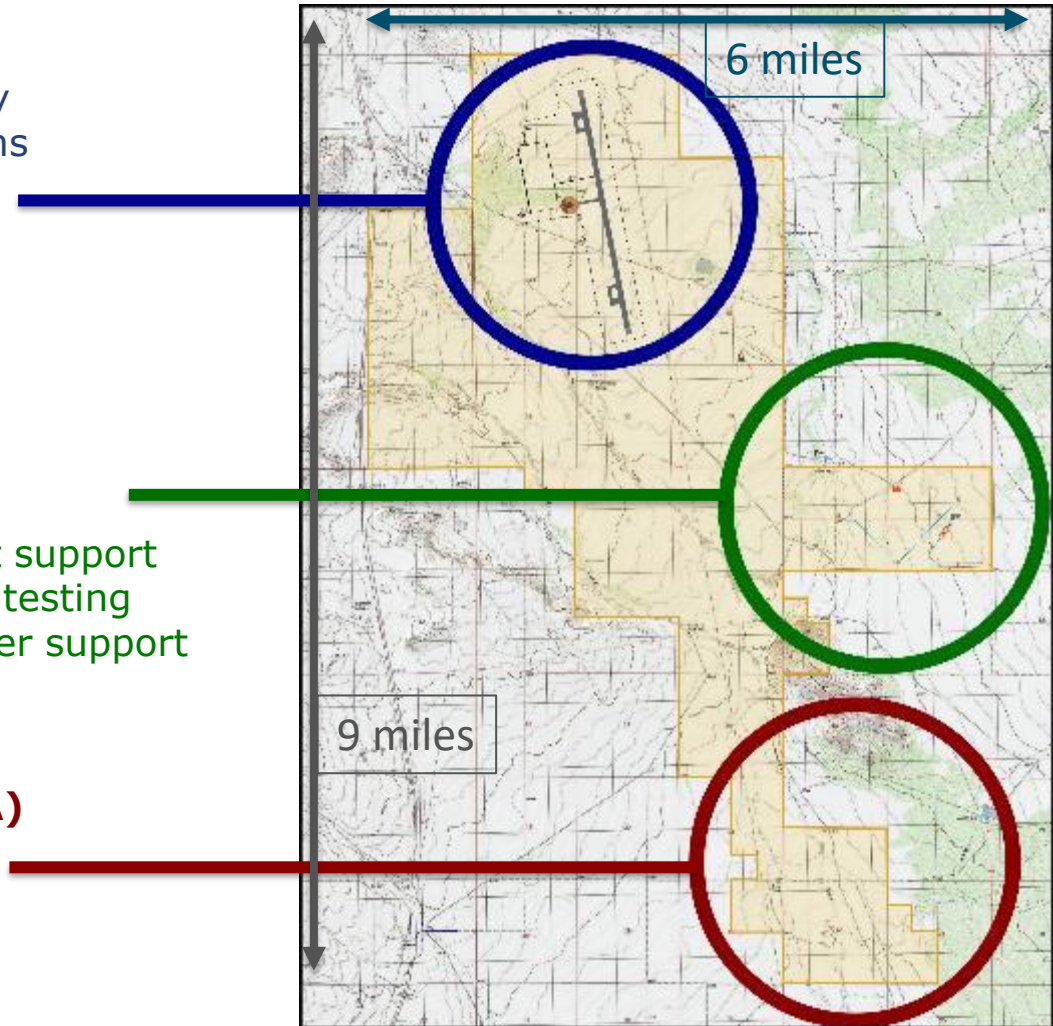
- 12,000-ft long, 200-ft wide runway
- Horizontal and air launch operations
- Space tourism
- Conventional aircraft operations
- Unmanned aircraft operations
- High-altitude balloon operations

## Vertical Launch Area (VLA)

- Suborbital space research
- Launch vehicles R&D
- Solid, liquid, and hybrid propellant support
- Rocket motors manufacturing and testing
- Commercial and academic customer support
- Launch from SA, land on WSMR

## Advanced Technology Area (ATA)

- Emerging technologies, R&D
- Isolated environment



## RECENT ACTIVITY (LAST ~18 MONTHS)

- **USAF Thunderbirds** winter training
- Space flights by **Virgin Galactic**, with ops starting 2023
- Continued operations by **SpinLaunch**
- New High Altitude Pseudo-Satellite (**HAPS**) test site
- Continuation of **AeroVironment** activities including testing/training of **Jump 20** and **TUAS UAV** systems
- **Spaceport America Cup** successfully held
- Continued development of several **New Prospects** for permanent presence and aerospace events
- **Venue Events** on runway (non-aerospace)
- **STEM** and **Workforce Development** activities
- Scheduled liquid **rocket engine testing**
- **NMSU MARTE** grant project (regolith technologies)
- Preparing for **VLA launches** (one solid and one liquid)
- **Infrastructure Development** including roads, power, fiber, water, hangar fire suppression, SOC repairs, and other approved projects
- Contracted **Project Management services** (2 engineers) for capital improvements and infrastructure projects
- RFP for **Spaceport Master Plan** (underway)
- Visit <https://www.youtube.com/spaceportamerica> for updates and review of activities



# SPACE VALLEY COALITION



Space Valley Center



- 🚀 **Iconic destination**, heart of downtown ABQ
- 🚀 **Tenancy** for all coalition members, fast-growing startups, anchors
- 🚀 **750-capacity auditorium**
- 🚀 Built to make private & government collaboration easy

Vertical Launch Area @ Spaceport America



- 🚀 **Expanded vertical launch area** at Spaceport America
- Offices for Spaceport America and its companies @ Space Valley Center.*

Space Workforce of the Future



- 🚀 **Immersive bootcamps** for high-demand software & hardware engineering skills
  - 🚀 **Customized training** for key employer partners
  - 🚀 **Accelerated placement** of learners via NewSpace NM
- Co-located @ Space Valley Center with other higher ed partner programs.*

Unite & Ignite Expansion



- 🚀 **Incubator** to help companies elevate TRL, accelerate growth, gain high-value access to equipment, prototyping, and demonstration
  - 🚀 **K-12+ programming** to accelerate diversity and inclusion for company **internships, apprenticeships, and jobs**
- Co-located @ Space Valley Center*

Q Station Expansion



- 🚀 **Soft Landing** program for nat'l & int'l startups to locate in NM
  - 🚀 **Coworking** for space tech talent and companies to meet, collide, and work
  - 🚀 **Software Factory** to develop talent, provide lower-cost services, and accelerate placement
- Co-located @ Space Valley Center*

Venture Studio & Fund



- 🚀 **Venture Studio** to build space 2+ tech startups from idea to Seed and Series A annually
  - 🚀 **Venture Fund (\$25m)** to deploy capital to Studio companies, and join seed rounds.
- Co-located @ Space Valley Center*

- Formed in response to EDA BBB grant (did not win)... but coalition will expand and keep going
- Planned for National Science Foundation (NSF) Regional Engines grant
- Visit: <https://spacevalley.org/>

# SPACEPORT AMERICA CUP 2022

- Premier event hosted by Spaceport America since 2017
- 2020 cancelled, 2021 successfully held virtually
- 2022 was the largest Cup to date with 4 local teams competing



# SA CUP BY THE NUMBERS



- 5,500 participating overall
- 1,300+ students in NM
- 200+ teams signed up, 151 selected, 89 made it to NM
- 20 countries
- 4 regional schools
- 100+ volunteers (from around the country)
- 90 flights
- 8.9 million media impressions
- \$700k earned media
- 100k views on live stream
- \$1.2 million local economic impact
- Visit:  
<https://www.youtube.com/c/ExperimentalSoundingRocketAssociation>  
for 4 days of livestream
- ***Next year: week of June 19, 2023***



# CHILE CUP WINNER: NMSU ATOMIC AGGIES



- NMSU Atomic Aggies  
<https://www.facebook.com/NMSUAtomicAggies>  
<https://tinyurl.com/2pmjbjyd>
- NM Tech  
<https://tinyurl.com/2j56usbb>
- UNM Lobos  
<https://lobolaunch.unm.edu/>
- UTEP  
<https://tinyurl.com/2hvtbjr8>  
<https://tinyurl.com/2zabn42a>
- Outreach to other NM schools is ongoing
- See:  
<https://tinyurl.com/2nnfobwe>

# STEM AND OUTREACH

- Leading **GSA Academic Partnership Working Group** - ISS data collection program running in LCPS
- Assisted in bringing **Teachers in Space** Workshop to NM late June
- Supported **Girls in Aviation** event during SA Cup
- **NMSA Outreach efforts recognized** by state Delta Kappa Gamma group
- **STEM Visits** to local schools
- **Student site visits to SA** and partnership with tenants
- Supported the **Tuskegee Airmen Space Camp** rocket launches
- Creating new **STEM SA activity teaching coloring book**
- Working on updating **Visitor Experience** and merchandise (partnership with DCA)



# NMSA BUDGET



# NMSA BUDGET BACKGROUND



- Customer operations continue to increase each year, requiring additional services
- Current NMSA budget is about \$10.8 M per year. Customer revenue provides around \$6.9 million
- NMSA operating expenses contain fixed costs that cannot be reduced (facilities maintenance and 24/7 site operations) – these include services that the SoNM is contractually obligated to provide for customers
- Increased economic activity is returning monies the region and State of NM

# NMSA BUDGET (THOUSANDS)

| Item                  | FY21 Actual        | FY22 <sup>2</sup> Actual | FY23 Budgeted      | FY24 Request       | Notes  |
|-----------------------|--------------------|--------------------------|--------------------|--------------------|--|
| Customer Revenue      | 5,603              | 7,525                    | 6,924 <sup>3</sup> | 7,328              | Leases, user fees, utilities, fuel, services |
| General Fund          | 1,917              | 2,091                    | 3,878              | 3,878              |  |
| Expansion             |                    |                          |                    | 220                |  |
| <b>Revenue Total</b>  | <b>7,520</b>       | <b>9,616</b>             | <b>10,802</b>      | <b>11,426</b>      |  |
| 200 Personal Services | 2,120              | 1,720                    | 2,759 <sup>4</sup> | 3,387 <sup>5</sup> |  |
| 300 Contract Services | 4,550 <sup>1</sup> | 4,627                    | 5,638              | 5,655              |  |
| 400 Other Costs       | 1,968              | 2,299                    | 2,405              | 2,384              |  |
| <b>Expenses Total</b> | <b>8,638</b>       | <b>8,646</b>             | <b>10,802</b>      | <b>11,426</b>      |  |
|                       | 1,750 <sup>1</sup> | 1,000                    |                    |                    | FY22: Supplemental                           |
| Net Result            | 632                | 1,970                    |                    |                    |  |

## Notes

- 1) Partial contractual expenses (in the amount of \$1.75 million) were transferred to Capital Projects Fund, as directed by Legislature.
- 2) Ended June 30, 2022. Numbers are unaudited and subject to change for FY closeout.
- 3) Original budgeted as submitted September 2021.
- 4) Allows for 23 FTE's (approved for 28).
- 5) Working to get to 30 FTEs.

# SITE OPERATIONS AND MAINTENANCE

- **Electrical**
  - Poles
  - Lines
  - Transformers
  - PMHs
  - Buried lines
  - Generators
  - Lights
  - Solar cells
  - Switches
- **Water System**
  - Wells
  - Pumps
  - Tank (1.3 M gal)
  - Treatment plant
  - Holding tanks
  - Fire hydrants
  - Stormwater drains
- **Runway**
  - Surface
  - Paint
  - Apron
  - Caulking
  - Joints
  - Signage
  - FOD boss
- **SOC**
  - HVACs
  - Plumbing
  - Electricity
  - Flooring
  - Walls
  - Ceiling
  - Roof
  - Windows
  - Elevator
  - Fire protection system
- **VLA**
  - Buildings
  - Roads
  - Fences
- **GTS**
  - HVACs
  - Plumbing
  - Electricity
  - Flooring
  - Walls
  - Ceiling
  - Roof
  - Windows
  - Water system
  - Fire alert system
- **Fire protec. sys.**
  - Elevators
  - Stairs and railings
  - Skylights
  - Hangar doors
  - Outer walls
  - Bulwarks
  - Lighting
- **IT Equipment**
  - Servers
  - Routers
  - Firewalls
  - Printers
  - Storage
  - Wi-Fi Equipment
  - Remote sites equip.
  - Fiber infrastruc.
  - Computers
  - Cell & desk phones
  - Telecom equip.
- **Security Equip.**
  - Cameras
  - Recording equipment
  - Vehcl gates/stops
  - Personnel gates
- **Safety Equip.**
  - Badge readers
  - Fire extinguishers
  - PPE
  - AEDs
  - AWOS
- **Fuel Farm**
  - Fuel farm
  - Fuel trucks
  - Certifications
- **Fabric Hangar 1**
  - Clamshell door
  - HVAC
  - Fire protection system
- **Grounds**
  - Mowing
  - Weeding
  - Fences
  - Walkways
  - Parking Lots
  - Sidewalks
- **Roads**
  - Surface
  - Edges
  - Drains
  - Striping
- **Equipment**
  - UTV 1
  - UTV 2
  - UTV 3
  - Light towers
  - Generators
  - Manlift
  - Tractor 1
  - Road grader
  - Dump truck
  - Sweeper truck
  - Ambulance and its equipment
  - ARFF truck and its equipment
  - Brush Truck and its equipment
  - Firetruck and its equipment
  - Manlift
- **General**
  - Trash bins/removal
  - Storage containers
  - Signage

# ECONOMIC IMPACT

- Total “**new money**” jobs due to the spaceport (direct, indirect, and induced) is estimated at **500+** with estimated payroll at over \$34 million.
- **Tenant-paid construction** is estimated at about \$10 million a year
- Customer **salaries, construction, and services** all add to collected GRT and state collected income taxes
- Spaceport customers spend money on **hotels, meals, and other items** locally throughout the year.
- ***This economic activity is estimated to return to the state close to \$3 million via income tax and GRT***
- As Virgin Galactic increases operations, there will be substantial additional employment, with concurrent increase in related tourism
- NMSA is continuing to attract new long-term tenants and short-term customers
- The spaceport is helping sell New Mexico as an entrepreneurial destination for the “new space” economy

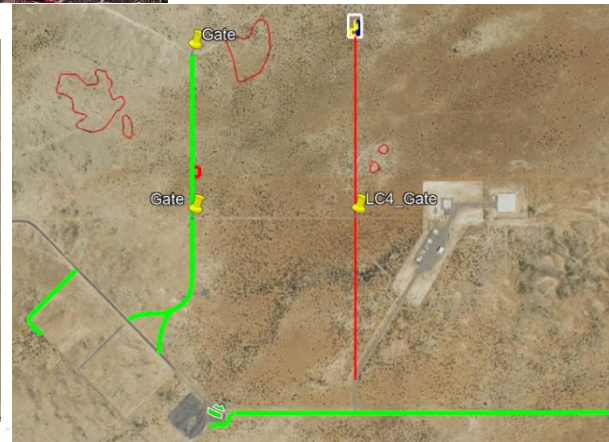
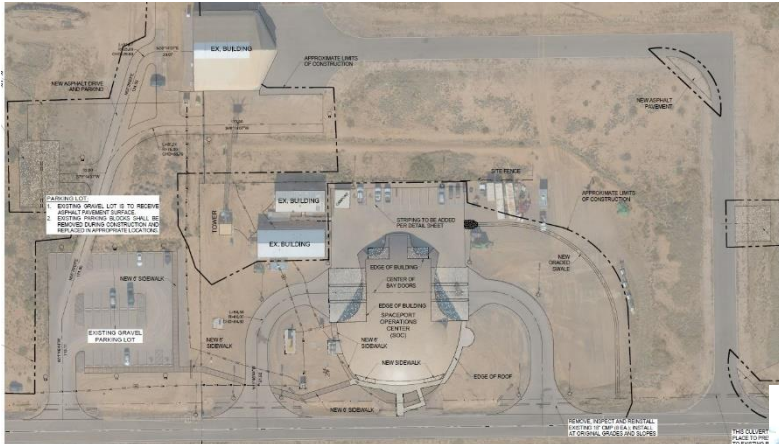
# INFRASTRUCTURE DEVELOPMENT





- In progress items include (\$34 million):
  - Spaceport Operations Center (SOC) Repairs (\$1.2M)
  - Fabric Hangar Improvements (fire alarm, fire suppression, and HVAC) (\$800k)
  - Spaceport Technology and Reception Center (STARC) (\$10M)
  - VLA Rocket Launch Rail (\$1.8M)
  - Vertical Launch Area Improvements (\$5M); Roads, electricity, water, restrooms, rentable buildings, and concrete pads
  - Cell phone tower and supporting fiber optic extension
  - General Purpose Hangar(s) (\$2M)
  - Master Plan (\$1M)
  - Taxiway (\$20M total, \$2M funded)
  - Infrastructure upgrades (\$7.5 total, \$1.5M funded)
  - Viewing Lot and improved viewing access of VG replica
  - T or C Tour Depot upgrades
  - NM Statewide Pricing Agreement contractors are being utilized to access project management services to increase development and implementation speed.

# INFRASTRUCTURE IMPROVEMENT EXAMPLES



- **1. Spaceway Taxiway – 2023 / 2028**

Full-length taxiway, runway upgrades, drainage, aprons, aircraft parking areas. (Funded at \$2 million, total project cost estimated at \$20 million)

- **2. General Infrastructure - 2025 / 2028**

Improvements and expansion, includes internal roads, parking, utilities (power, water, waste management, telecommunications, internet). (Funded at \$1.5 million, with additional \$1.5M per year)

- **3. Warehouses / Light-Duty Shops – 2025**

Facilities to support customers' needs and be made available under short- and long-term lease arrangements. (Not currently funded, total project cost about \$5 million)

# OUTLOOK



# GROWTH STRATEGY – NEXT FIVE YEARS

- **Continue to work with Virgin Galactic to maximize economic impact of regular space tourism flights and space operations**
  - As Virgin Galactic moves toward additional carrier aircraft and several spaceships, the region will see significant and consistent positive economic benefits
- **Continue to enable other customer successes**
  - SpinLaunch, AeroVironment, UP Aerospace, etc.
- **Focus on appropriate markets and find new tenants that increase local private sector jobs, and help enable the entire NM aerospace ecosystem**
  - Continually update business development targets and operational plans as the commercial space marketplace continues to grow
- **Acquire FAA reentry license and work toward attracting viable partners**
  - Suborbital point-to-point and orbital re-entry programs are upcoming markets and will be carefully and objectively considered, dimensioned, and cultivated
- **Watch new technologies...**
  - Continue watching for other emerging markets, technologies, and requirements. Adjust our operational capabilities to meet them (e.g., master plan results)

Spaceport America is competitive, and well positioned for the growing commercial space and aerospace market.

# WORKING ON FAA REENTRY LICENSE

## SPACENEWS

### Sierra Space signs agreement for Dream Chaser landings at Spaceport America

by Jeff Foust — June 21, 2022



## The Denver Gazette

### Sierra Space teams with New Mexico's Spaceport America


Dennis Huspeni dennis.huspeni@gazette.com Jun 23, 2022 Updated Aug 3, 2022



NEW MEXICO INNO

### Spaceport America signs agreement with Colorado-based Sierra Space

Email Facebook LinkedIn Twitter



# SIERRA

S P A C E

DREAMS WORTH CHASING™

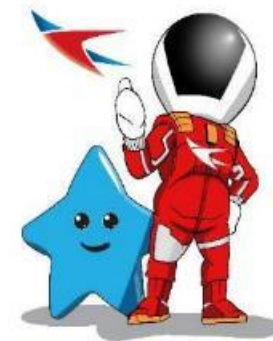
# THANK YOU FOR THE OPPORTUNITY TO TALK ABOUT SPACEPORT AMERICA

## Questions?



Visit to SA by C-17 Transport

- URL: [WWW.SPACEPORTAMERICA.COM](http://WWW.SPACEPORTAMERICA.COM)
- EMAIL: [SCOTT.MCLAUGHLIN@SPACEPORTAMERICA.COM](mailto:SCOTT.MCLAUGHLIN@SPACEPORTAMERICA.COM)
- MAIN PHONE: (575) 267-8500
- GOOGLE EARTH LINK TO SITE: [HTTPS://TINYURL.COM/Y4GRKVCA](https://tinyurl.com/y4grkvca)



THE SPACE TO BE...

# EXTRA SLIDES



The New Mexico Spaceport Authority shall:

- A. Encourage and foster development of the state and its cities and counties by **developing spaceport facilities** in New Mexico;
- B. Actively promote and assist public and private sector infrastructure development to attract new industries and businesses, thereby **creating new job opportunities** in the state;
- C. Create the statutory framework that will enable the state to **design, finance, construct, equip and operate spaceport facilities** necessary to ensure the timely, planned and efficient development of a southwest regional spaceport; and
- D. Promote educational involvement in spaceport activities and **education and training of the workforce** to develop the skills needed for spaceport operations.

From the New Mexico Spaceport Development Act, 2005