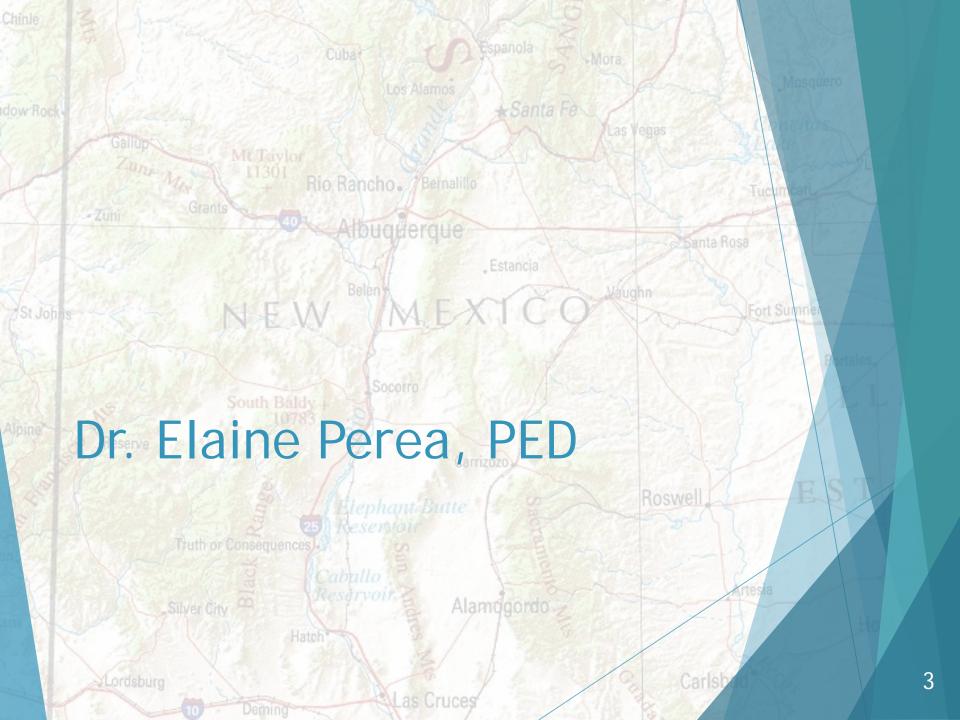


#### Introductions

- Dr. Elaine Perea, PED
- ▶ Tracey Bryan, Bridge of Southern NM
- Dr. Eugene Schmidt, Farmington Municipal Schools
- Robin Kuykendall, Clovis Community College
- Deputy SecretaryDr. Gwen Perea Warniment, PED



#### College & Career Readiness

# All NM high school students graduate and are career ready.

- Graduates will have:
- the <u>academic skills</u> needed to succeed in postsecondary studies,
- the <u>employability skills</u> that are essential in any career area, and
- <u>awareness</u> of the next steps in their career path.



#### Wind Turbine Technology

Corona, Carrizozo, Hondo, Cloudcroft, Mescalero Apache, and Mesalands Community College

Carlsbac





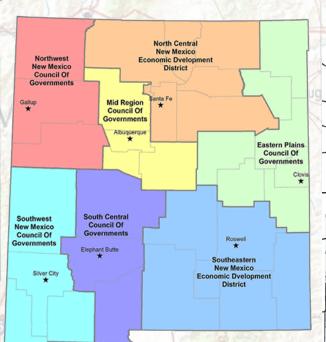
Central

Eastern

Northern

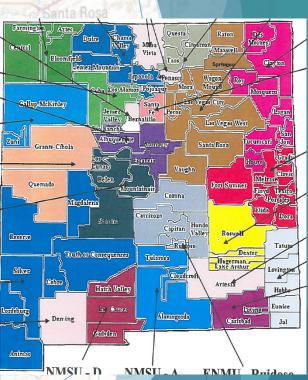
Southwestern

## NEW EXICO ECONOMIC DEVELOPMENT



Alamogordo

NEW MEXICO
HIGHER EDUCATION DEPARTMENT

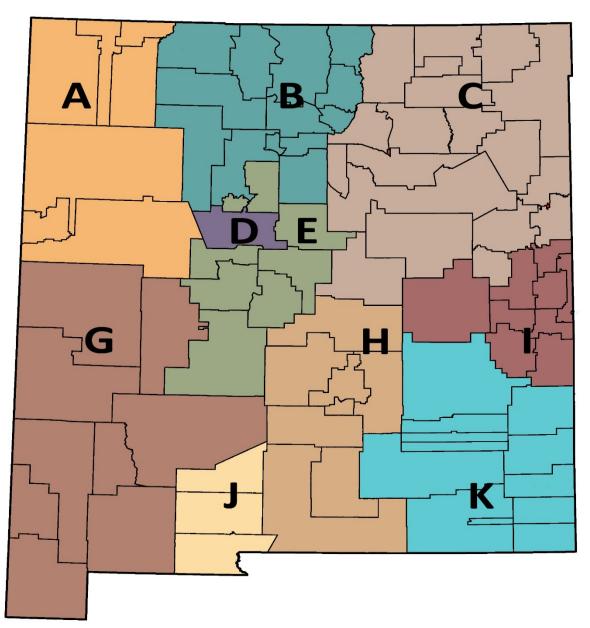


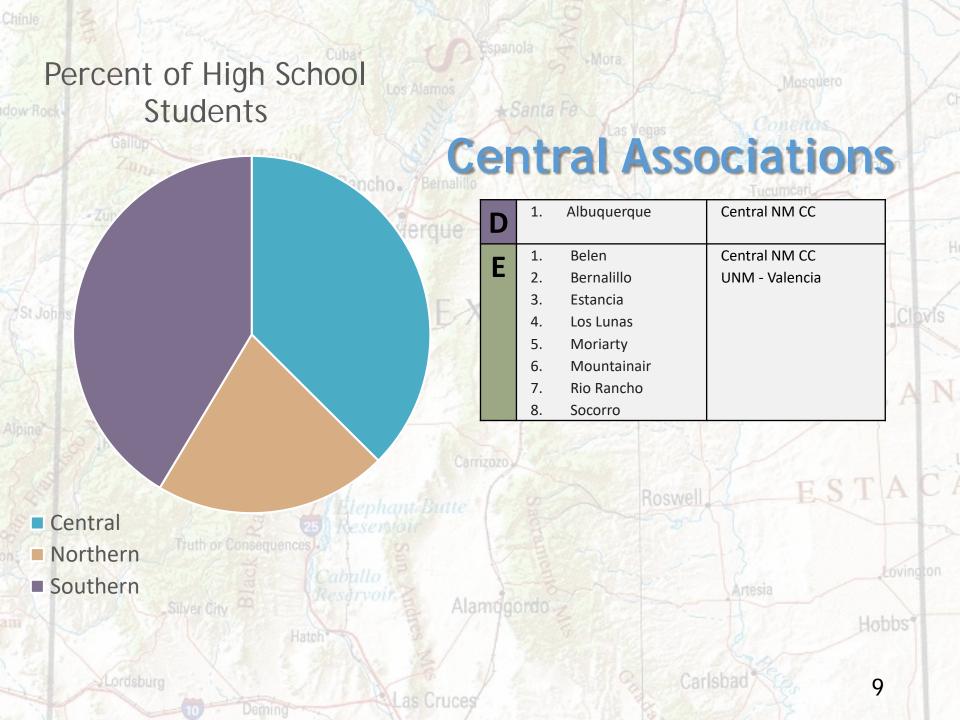
Lordsburg

Carlsb

7

### Regional Consortia





# Northern Associations

Mosquero

1	Galli		
Λ	1.	Aztec	NMSU - Grants
A	2.	Bloomfield	San Juan College
	3.	Central	UNM – Gallup
	4.	Farmington	
	5.	Gallup-McKinley	

# B 1. Chama Valley 2. Cuba 3. Dulce 4. Española 5. Jemez Mountain Northern NM College Santa Fe CC UNM - Los Alamos UNM - Taos

Grants-Cibola

Jemez Valley

Los Alamos

Mesa Vista

Pojoaque Valley

Peñasco

Questa

Santa Fe

Taos

Zuni

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-01			A COUNTY OF THE PARTY OF THE PA
_	1.	Cimarron	Highlands University
	2.	Clayton	Luna CC
	3.	Des Moines	Mesalands CC
	4.	House	
	5.	Las Vegas City	
	6.	Logan	
	7.	Maxwell	
	8.	Mora	
	9.	Mosquero	
	10.	Pecos	
	11.	Raton	
	12.	Roy	
	13.	San Jon	
	14.	Santa Rosa	
	15.	Springer	
	16.	Tucumcari	
	17.	Vaughn	
	18.	Wagon Mound	
	19.	West Las Vegas	

Hatch

Carlsbad 7

Hobbs\*

#### **Southern Associations**

1	1000		44P 1 1130	
ŕ	G	1.	Animas	Western New Mexico
í	U	2.	Cobre	University
î		3.	Deming	
		4.	Lordsburg	
4		5.	Magdalena	
		6.	Quemado	
			Independent	
1		7.	Reserve	
4		8.	Silver	
4		9.	T or C	
90		1.	Gadsden	NMSU - Dona Ana
20	J		Independent	
000		2.	Hatch Valley	
ă		3.	Las Cruces	

3. Carrizozo 4. Cloudcroft 5. Corona 6. Hondo Valley 7. Ruidoso 8. Tularosa 1. Clovis Eastern New Mexico 2. **DORA** University 3. Elida **Clovis Community** College 4. Floyd Fort Sumner 6. Grady 7. Melrose 8. **Portales** 9. Texico Artesia NMSU - Carlsbad K Carlsbad ENMU - Roswell 3. Dexter New Mexico Junior **Eunice** College 4. 5. Hagerman 6. Hobbs 7. Jal 8. Lake Arthur 9. Loving 10. Lovington Alam Roswell 11. Independent 12. Tatum

Alamogordo

Capitan

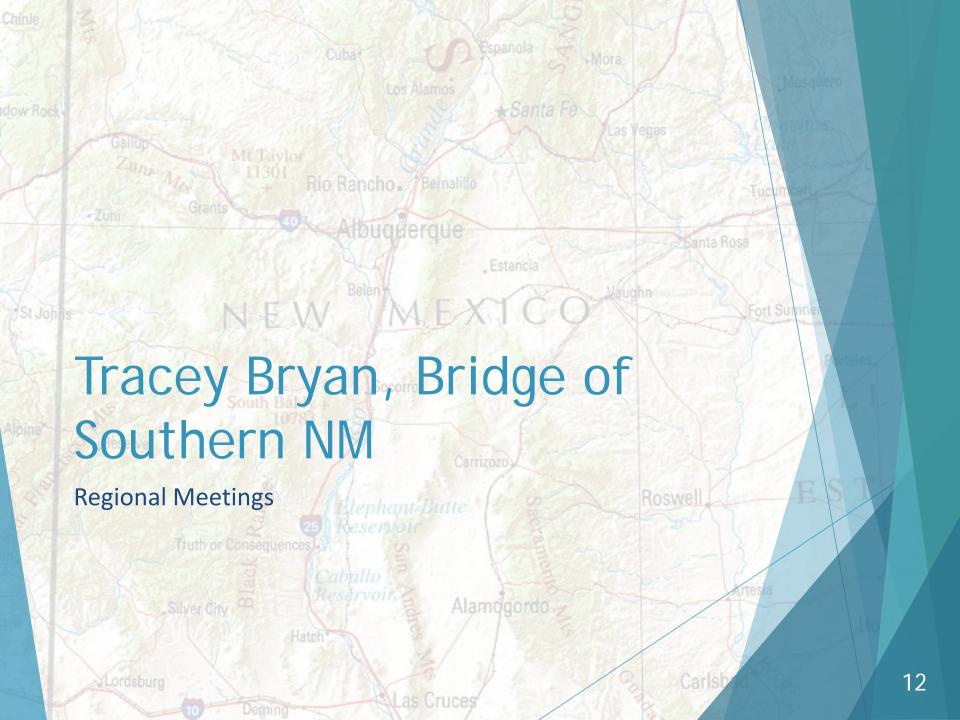
2.

ENMU - Ruidoso

NMSU - Alamogordo

Lordsburg

11



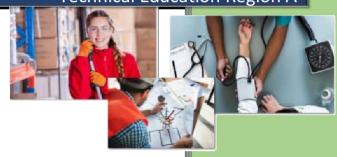
# Determining Priorities: The Comprehensive Local Needs Assessment (CLNA)

Regional meetings held in Spring 2020 to evaluate and select priorities

- Goal: build on existing community strengths
- Coordinate regional partnerships with industry
- Address key industry needs
- Help businesses grow
- Target our resources and invest for growth

2020

Labor Markets in New Mexico's Career and Technical Education Region A



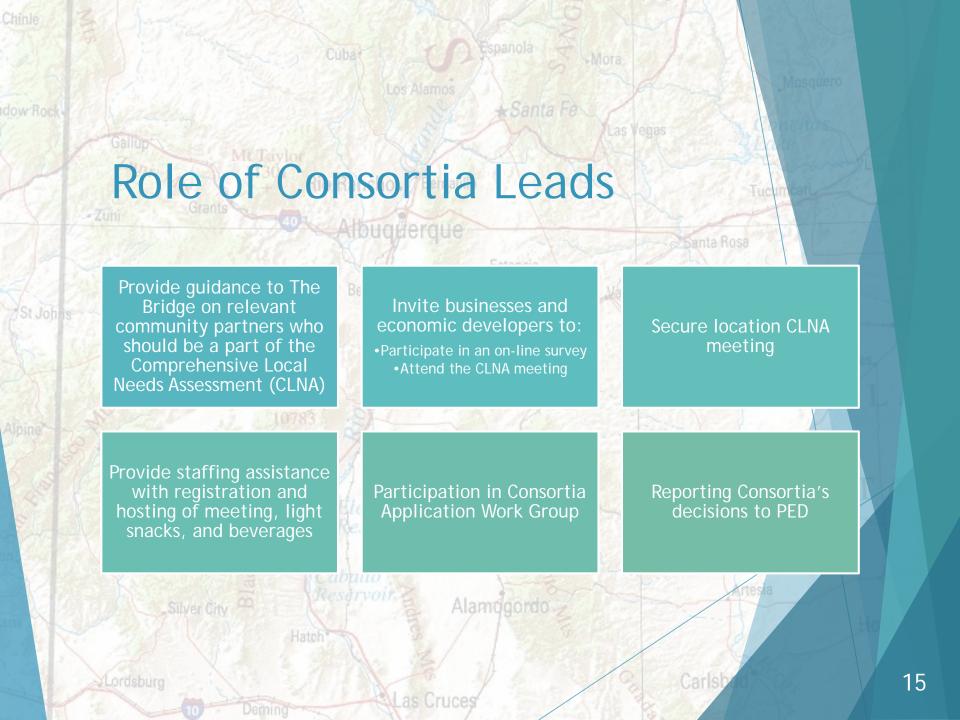
**Trevor Stokes** 

NS4ED

1/1/2020

# Carl B. Perkins Funding (Perkins V) (PED)

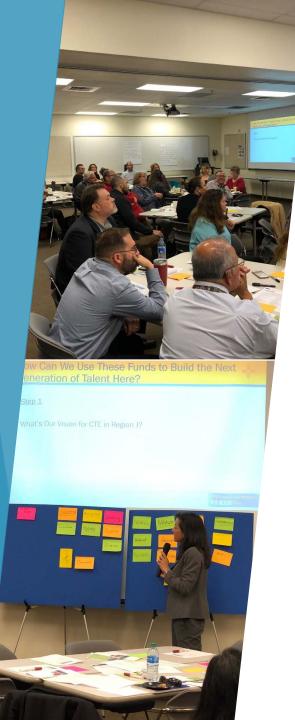
- Guided by Comprehensive Local Needs Assessments:
- Labor Market Information
- Economic Development Targets
- Consortia-Based Decision-Making:
  - Majority Voice Business and Economic Development
  - Public and Higher Education CTE Representatives
  - Community Representatives (including parents and students)
  - State Workforce Board representatives
  - Representatives of Special Populations
  - Representatives of agencies that serve Out-of-School, Homeless, and At-Risk Youth
  - Representatives of Tribal Organizations and Tribes
  - Individuals with Disabilities



#### Consortia Leads by Region

- Region A Johnny Gonzales, Gallup EDC
- Region B Val Alonzo, Regional Development Corporation
- Region C Keith Barras, Union County EDC
- Region D Rob Black, Association of Commerce and Industry
- Region E Fred Shepherd, Sandoval EDC/ Jerry Schalow, Rio Rancho Chamber of Commerce
- Region G Steve Chavira, Silver City Chamber of Commerce
- Region H Becky Brooks, Ruidoso Chamber of Commerce
- Region I Chase Gentry, Rachel Forrester, Clovis Industrial Development Corporation
- Region J Davin Lopez, Mesilla Valley Economic Development Alliance
- Region K Sidney Woods, Carlsbad Industrial Action
  Missi Courier, Lea County EDC
  Leslie Boldt, Lovington Chamber
  Patricia Collins, Hobbs Chamber

Fort Summi



# Purpose of the Consortia Meetings

- ▶ 10 Regional Meetings
- > 779 Participants
  - ▶ 448 Community Partners
  - ▶ 331 Educators
- ► Facilitated each region's cross-sector participants using Technology of Participation® (ToP) technique developed by the Institute for Cultural Affairs
- Collectively share, analyze, and record data on the required elements in the regional needs assessment to identify areas of opportunity
- Collectively set priorities and vision for the region and collaborate with Consortia Lead on a regional strategic plan



#### **Data-Informed Decisions**

Highlighting Opportunities in Each Region's Labor Market Analysis:

- ▶ High Quality Careers
- Projected growth
- Wages

		W 1	
		100	

Caball

Hatch

High Quality Career	2016 Jobs	2026 Jobs	New Jobs	% Change	Annual Openings	Average Earning
Health Care Practitioners Health Care Support Oc	cupation	s				
Registered Nurses	1,426	1,576	150	11%	94	\$65,940
Industrial Machinery Mechanics	583	636	53	9%	68	\$59,037
Physical Therapists	79	116	37	47%	8	\$84,262
Physical Therapist Assistants	51	76	25	49%	10	\$47,510
Nurse Practitioners	54	77	23	43%	6	\$100,28
Licensed Practical & Licensed Vocational Nurses	216	237	21	10%	19	\$49,320
Physician Assistants	83	102	19	23%	7	\$112,94
Occupational Therapists	43	60	17	40%	4	\$87,964
Dental Hygienists	141	158	17	12%	11	\$77,498
Respiratory Therapists	90	104	14	16%	6	\$45,16
Management Occupations						
Medical and Health Services Managers	141	170	29	21%	15	\$93,476
Construction Managers	177	192	15	8%	17	\$97,36
Production Occupations						
Welders, Cutters, Solderers, and Brazers	486	549	63	13%	65	\$51,728
Machinists	100	141	41	41%	18	\$55,443
Supervisors-Production and Operating Workers	221	247	26	12%	26	\$70,220
Aircraft Structure, Surfaces, Systems Assemblers	30	46	16	53%	8	\$65,159

Las Vegas

Alamogordo

### Consortia Discussion Topics



What is the Region's Vision for NextGen CTE?



What are the 2-3 Priority Industry Sectors?



What strategies will be addressed at the regional level?



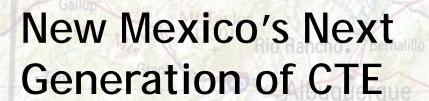
What are the shared programs (K-12, College, Workforce) that will help accomplish this goal?



What are the potential challenges for accomplishing this goal?

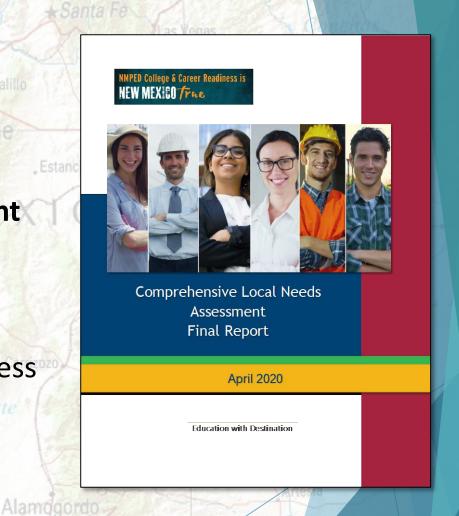


What shared commitments are needed for our goal to succeed?



#### **Regional Vision for CTE Talent**

- Skill Based
- Attitudes
- Workforce and Life Readiness

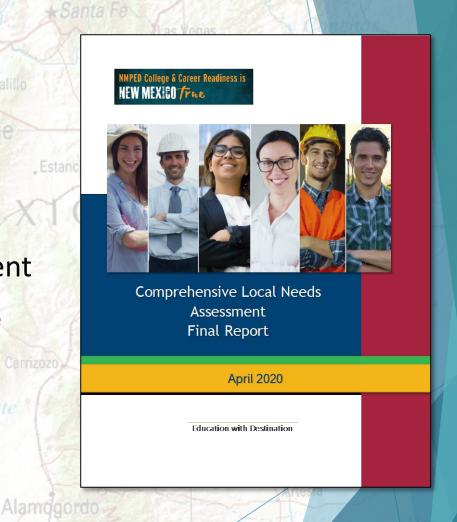


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#### New Mexico's Next Generation of CTE

# Descriptions of Effective CTE Systems

- Business Relevance/Alignment
- Career Awareness/Exposure
- Skill Development
- Student Engagement
- Sustainability



# New Mexico's Next Generation of CTE Industry Targets

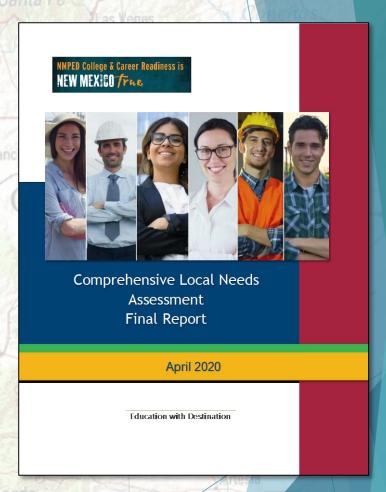
- ► Healthcare (8 regions)
- ➤ Skilled Trades (8 regions)
- Professional, Scientific, and Technical Services (4 regions)
- ► Intelligent Manufacturing (3 regions)
- Agriculture, Food, and Natural Resources, including Energy (3 regions)
- ► Information Technology (4 regions)
- ► Education (2 regions)
- ▶ Hospitality/Tourism (1 region)

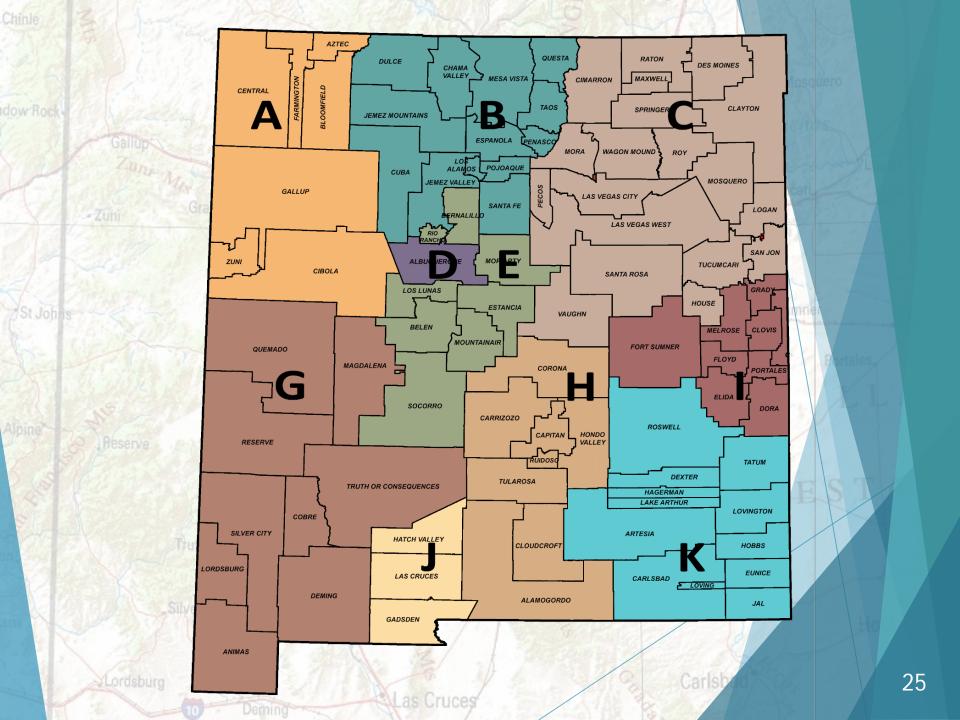


#### New Mexico's Next Generation of CTE

# Regional Solutions for Expanding Partnerships and Sustainability

- Industry Leadership
- Workforce Connections
- Nonprofits
- City and County Governments
- "Community-Based" Approach
   to CTE





### Regional Priorities

Α	1.	Healthcare	Northern: TBD	Region A's CTE programs promote regional pride though their distinct, diverse,
	2.	Information Technology		well-qualified pools of talent relevant to the needs of current and future business and industry. Career and Technical Education graduates are well
	3.	Intelligent		skilled, credentialed, and ready to drive the region's economy.
		Manufacturing		
В	1.	Healthcare	Northern: TBD	CTE in Region B provides relevant career exposure, preparation, and pathways
D	2.	Skilled Trades	Central: Construction,	for students aligned to meaningful careers in key industry sectors. CTE
	3.	STEM/IT-Computer	Healthcare/Social	programs are agile and responsive to employers' needs, equipping students
		Science	Services, Prof, Scientific,	with foundational skills for cross-industry application. It is flexible in design
			& Technical Services	and delivery to provide the broadest possible access to high-quality programs
				throughout the region.
	1.	Agriculture, Food,	Northern: TBD	CTE in Region C provides students & families focused exposure to career
		and Natural	Eastern: Healthcare,	options & opportunities: are responsive to the needs of the region, generate
		Resources	Teaching, Energy	credentials and training valued by employers in our target industry, and are
	2.	Skilled Construction		broadly accessible to all in the region.
		Trades		

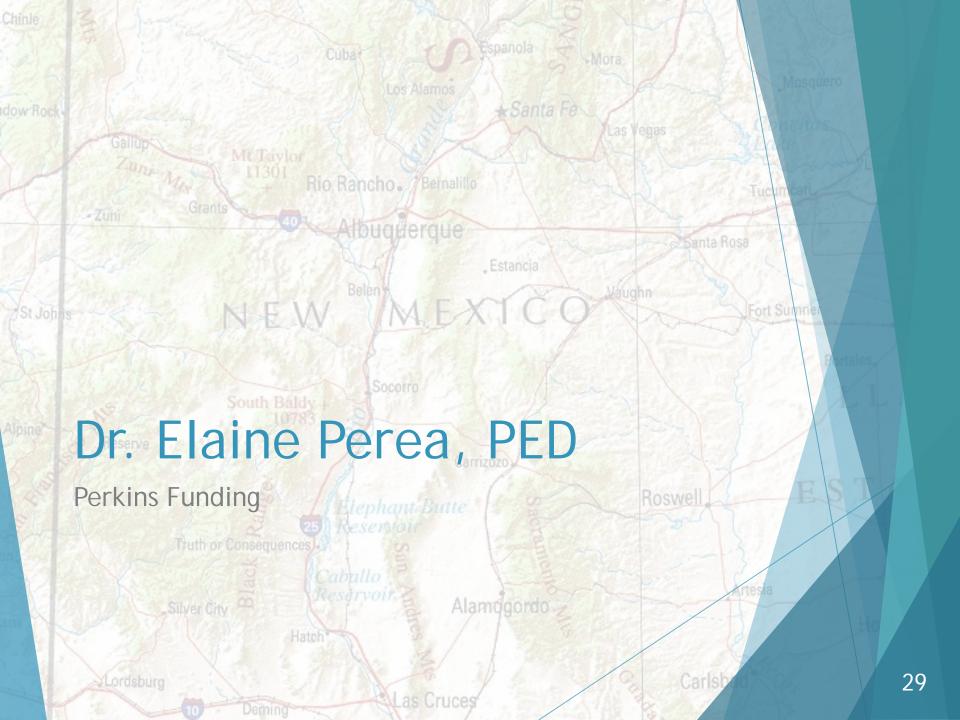
### Regional Priorities

	1.	Healthcare	Central: Construction,	CTE in Region D is seamlessly aligned and integrated in supporting career
U	2.	Hospitality/Tourism	Healthcare/Social	readiness for students as they navigate accessible pathways between K-12,
	3.	Skilled Trades	Services, Prof, Scientific,	college, and careers in relevant industry sectors. CTE is flexible and
	4.	STEM/IT-Computer	& Technical Services	responsive to the evolving needs of both students and employers, generating
		Science		talent with the right skills, attitudes, and credentials for long-term success.
	(Mai	nagement/CTE Ed		
	Prep	)		
Е	1.	Health Science	Central: Construction,	CTE in Region E is driven by collaboration with industry, students, and
E	2.	IT/STEM	Healthcare/Social	community and maximizes all of the resources in the region to achieve
	3.	Manufacturing	Services, Prof, Scientific,	success. Talent in Region E is informed, educated, excited, and ready for
	4.	Skilled Trades	& Technical Services	careers here now, and in the future.
			NAME AND DESCRIPTION	

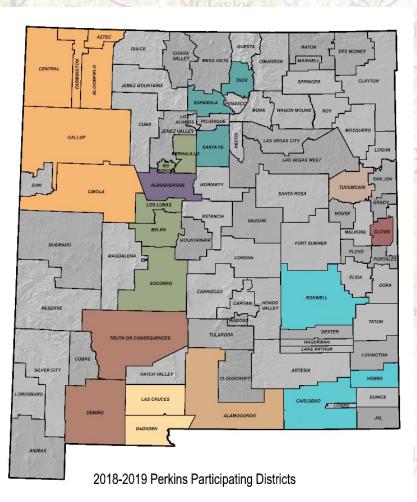
### Regional Priorities

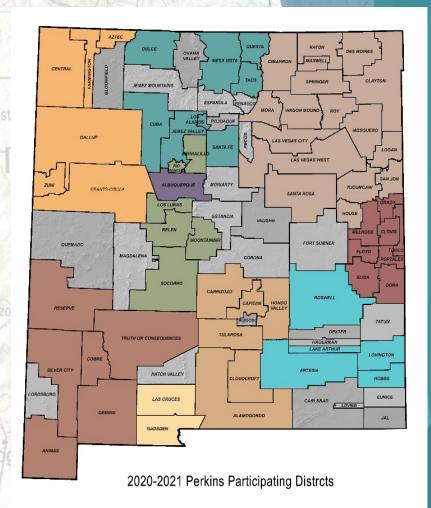
1		1.	Healthcare	Southwestern:	CTE in Region G is aligned and responsive to the needs of business, industry,
1	G	2.	Skilled trades,	Healthcare, Education	economic development, and entrepreneurial skills. It is mutually accountable
ı			including Mining		and brings all partners together to grow and retain our local talent.
		3.	Education		
1	Н	1.	Healthcare	Eastern: Healthcare,	CTE in Region H is an engaging partner to build a better future for the
4	П	2.	Skilled Construction	Teaching, Energy	community.
			Trades		
	1	1.	Agriculture	Eastern: Healthcare,	CTE in Region I generates well-informed, well-rounded talent. It brings
1	1	2.	Manufacturing	Teaching, Energy	together all of the partners, assets, and investments to be aligned and
1		3.	Technology		responsive to the needs of industry and economic development. CTE provides
					both career exposure and training.
	1	1.	Healthcare	Southwestern:	CTE in Region J provides broad exposure and optimal opportunity for
	J	2.	Prof., Scientific, &	Healthcare, Education	students' academic and economic success. Career and Technical Education
			Technical		creates a supportive community, aligned to the needs of students, businesses,
		3.	Skilled trades		industry, and economic development.
Ì		4.	Education		
	1/	1.	Healthcare	Eastern: Healthcare,	Region K's Career Pathways breed innovation, opportunity, and progress. The
	K	2.	Skilled Trades	Teaching, Energy	CTE system of the region creates a talent pipeline that drives and supports
					regional economic opportunities by engaging all stakeholders.

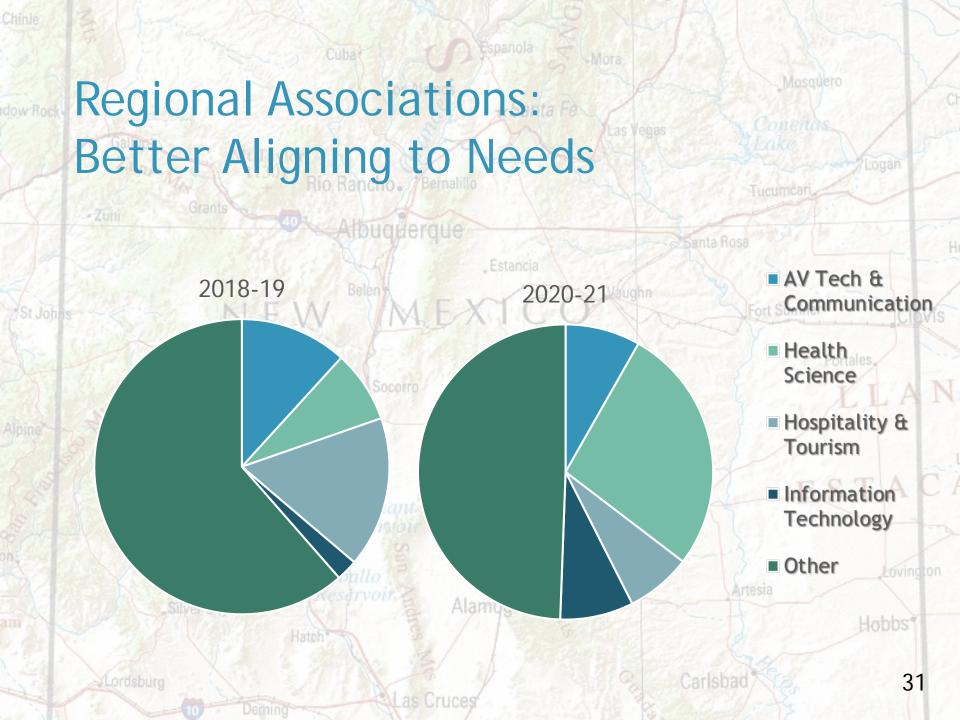
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# Regional Associations: Perkins Funding Open to All







#### Section 22-1-12(2019): 7 year CTE pilot

#### Minimum requirements for funded programs

- Rigorous content, aligning academic standards and CTE content
- 2. Pathways to postsecondary
- 3. Dual credit
- 4. STEM competency
- 5. Soft and social skills
- 6. Industry credential, AA/AS or BA/BS
- Partnerships between secondary, postsecondary, and business and industry
- 8. Collect and evaluate outcome data

### State CTE: Closing Funding Gaps

- Developing CTE okay full program not required
- Career exploration
- ► Employability skills, including CTSO costs
- Integration of Math and CTE
- Dual Credit teacher credentials

### Next Gen CTE funding

Rio Rancho Bernalillo

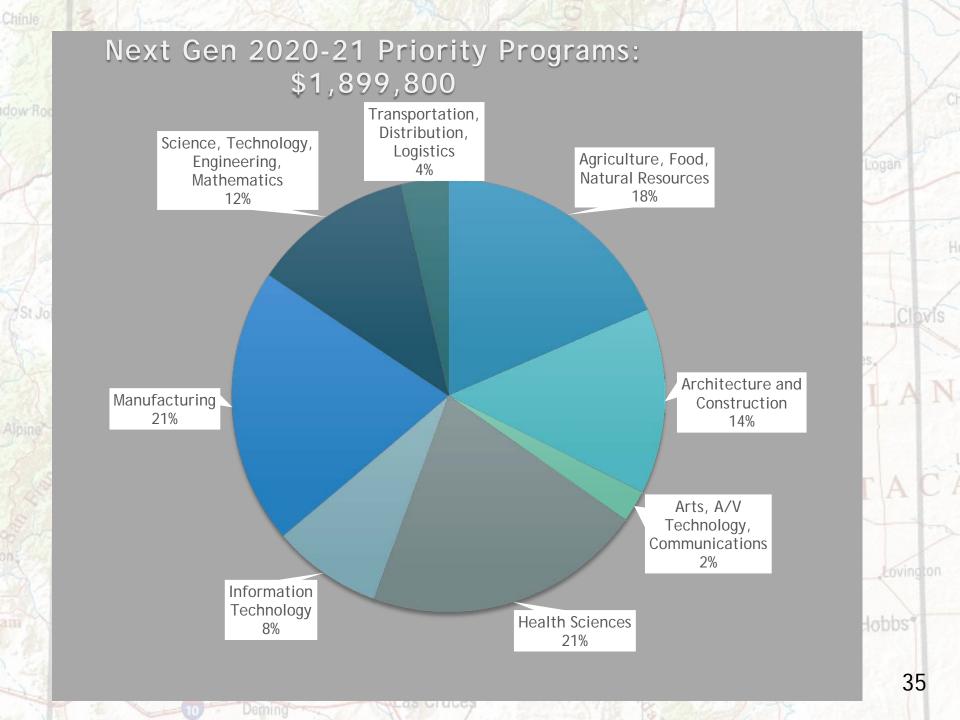
- 2019-20 \$4.5 million budget, \$3.1 million RfRs
- 2020-21 \$4.5 million budget
- ▶ 2020-21
  - ► 103 high schools
  - ▶ 34 charters
  - ► Grades 6-12

#### 2020-21 Awards

▶ \$1.9 million Priority Programs

Las Vegas

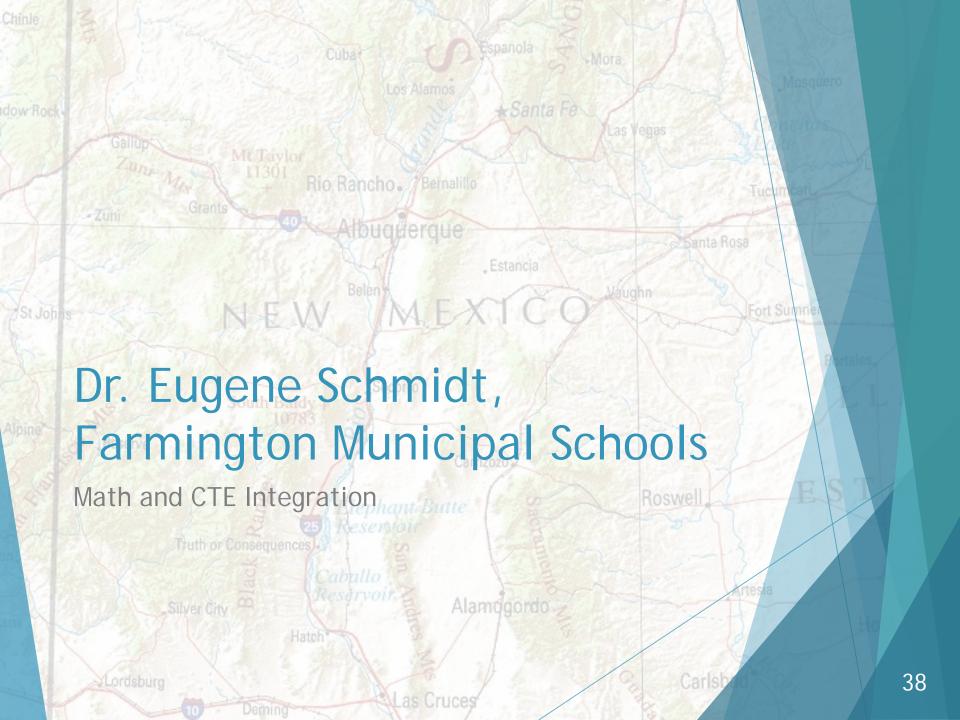
- > \$550,000 Non CLNA
- CTE Supports
  - Exploration \$450,000
  - ► Employability \$204,000
  - Work Based Learning \$154,000
  - Math & CTE \$120,000
  - Dual Credit \$98,000





# CTE Funding - Highest in 10 years

Region	Perkins V	Next Gen	Total
Α	\$1,280,287	\$331,268	\$1,611,555
В	\$642,271	\$564,984	\$1,207,255
С	\$200,553	\$207,893	\$408,446
D	\$2,597,142	\$803,256	\$3,400,398
E	\$485,866	\$162,972	\$648,838
G	\$242,609	\$496,874	\$739,483
Н	\$256,195	\$334,138	%590,333
1	\$339,649	\$340,956	\$680,605
J	\$1,110,190	\$194,081	\$1,304,271
K	\$454,991	\$304,842	\$759,833
Total Direct	\$7,609,753	\$3,741,264	\$10,766,587



# Integration of Math and CTE Farmington Municipal Schools

- Algebra I and Geometry lessons, aligned to state standards
- ► Each lesson is focused on a specific career
- Includes up to date information from Department of Labor
- ▶ Piloting in 22 districts



### Connecting Learning to Careers

When students experience <u>purpose</u> in their learning...





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### New Approaches to Math Instruction

Connecting math to careers can be a powerful approach to incorporating purpose into math learning.

- When math is taught in the context of a viable career, students can see:
  - how math is applied in meaningful, everyday tasks;
  - the relationship between math proficiency and successful job performance; and
  - the value in using math to reach jobrelated goals.
- Bottom Line Connecting math to careers brings purpose to math learning. This has the potential to improve students' attitudes toward math and enhance motivation to acquire the critical math skills students will need for employment success.



### A New Approach to Algebra and Geometry

- Each student lesson begins with a comprehensive career overview that introduces students to:
  - Job Duties and Responsibilities
  - Education Requirements
  - Types of Employers
  - Career Cluster and Pathway
  - Labor Market Data (wage and demand projections)
  - Occupation-Related Math Concepts
  - Common Work Tasks

#### LESSON 10

#### Volume of Cylinders, Cones, and Spheres



#### **CAREER SPOTLIGHT: Agricultural Engineer**

#### Occupation Description

Agricultural engineers work on the storage and processing of agricultural products. They use computer programs to solve problems and design various systems, structures, and facilities. Their work can involve pollution and environmental issues. They work in various fields of farming, such as aquaculture, forestry, and food processing.

This career is relevant to New Mexico as agricultural engineers are employed in the industry sector of sustainable agriculture and value-added agriculture.

Agricultural engineers who solve design problems involving structure will need to understand and apply concepts involving volume.

#### Education

Agricultural engineers need a bachelor's degree, often in agricultural engineering or biological engineering. Students study advanced calculus, physics, biology, and chemistry.

#### Potential Employers

Agricultural engineers held about 2,600 jobs in 2018. The largest employers of agricultural engineers were as follows:

Crop production	31%	
Federal government, excluding postal service		
Colleges, universities, and professional schools; state		
Management, scientific, and technical consulting services	8%	
Engineering services	4%	

Watch a Video about Agricultural Engineers: https://www.bls.gov/ooh/architecture-and-engineering

agricultural engineers.htm

NS4ed™ Pathway2Careers™ 2018 Trademark NS4ed, LLC

#### Career Cluster

Agriculture, Engineering, Food and Natural Resources

#### Career Pathway

Power, Structure and Technical Systems

#### Career Outlook Salary Projections:

- Low-End Salary, \$46,500 Median Salary, \$77,110 High-End Salary, \$116,850
- Jobs in 2018: 2,600
- Job Projections for 2028: 2,800 (increase of 8%)

#### Geometry Concepts

- Apply volume of solids.
- Apply concepts of density.
- Apply geometric methods to solve design problems.

#### Is this a good career for me? Agricultural engineers tend to:

- Use computers to design equipment, systems, or structures
- Modify factors that affect production
- · Test equipment
- Oversee construction and production operations

### A New Approach to Algebra and Geometry

- As students progress through each lesson they are shown "math at work."
- Targeted concepts are applied to several authentic work tasks.
- Students work through the examples and learn how the specific algebra or geometry concepts are relevant to the work individuals do in that occupation.

#### **Lesson Objective**

In this lesson, you will look at how an agricultural engineer uses the volume of solids when designing and evaluating structures and systems used in agricultural settings.

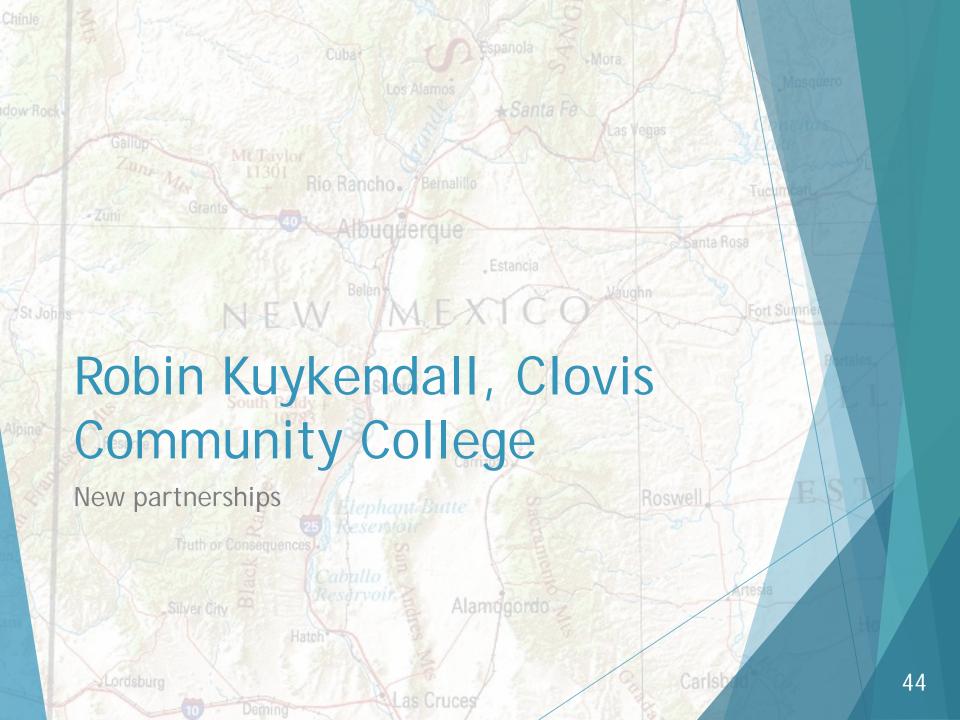
#### 1 Step Into the Career: Volume of Cylinders

An agricultural engineer is designing a farm storage system that will contain a silo for storing dried, shelled corn. The cylindrical part of the silo should store up to 400,000 pounds of corn. If the corn weighs 42 pounds per cubic foot, then which silo should be used?



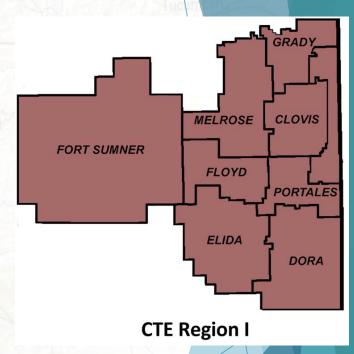
#### Devise a Plan

**Step 1:** Find the storage capacity of each silo. The storage capacity is the volume of the cylindrical part of the silo. The formula for the volume V of a cylinder with radius r and height h is  $V = \pi r^2 h$ .



# Region Association - Region I Clovis Community College

- Nine districts, only one was a Perkins recipient
- Pooled funds for both Perkins and Next Gen
- Clovis Community College and REC 3 are administering pooled funds



# Region I Focus

- ▶ Born through collaboration from regional industry, secondary, and post-secondary partners
- Career Exploration & Student Advisement Career Coaches
- Programs of Study
  - Agriculture
  - Welding
- Leverage resources to provide CTE options for rural students



# Clarifying the Focus: Programs Move Students to Employment

- Student Development is an ongoing movement
- Awareness of the world of work
- Deepening knowledge of a particular cluster
- Progressive coursework leading to credentials
- Smooth transitions

Secondary coursework

Postsecondary coursework

Credential of value



### Rio Rancho Film Program

Students in the Film and Digital Technology Pathway conduct interviews with local businesses and then provide content to RRPS teachers for online learning.

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## Looking Forward

- Pandemic considerations
  - Business Recovery is top priority
  - Entrepreneurship as tool to economic growth
  - Sector Strategies for each workforce region
  - Mindful of current unemployment and the long term impact to particular industries

# **Looking Forward**

- Increased support for regional associations
  - Rural and Economic Development Committee could be a key partner for LESC
  - Collaboration between legislators and community CEOs about Sector Strategies
    - ▶ Tax credits for youth internships
  - ► LESC report for Workforce Development
    - Career awareness
    - Seamless transitions

### State CTE ideas

- Direct funding for Work Based Learning experiences
  - Shared DWS/PED employee
  - Coordinators paid by Perkins and Next Gen
  - Employer salary match
- 2. Arizona Bonus funding for 3 course CTE completion
- 3. Idaho Per student funding (\$4,000) Money can be used for:
  - Advanced Placement tests
  - Dual Credit tuition
  - CTE certifications



