

# Geospatial and Population Studies

**Robert Rhatigan**

Director

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# Mission

Geospatial and Population Studies supplies trustworthy information that serves communities and government agencies; offers cutting-edge technology and research methods; and provides a fertile training ground at UNM for a new generation of applied researchers and decision makers.

# CY 2020 Goals and Status

**Goal 1: Support state and local efforts to ensure a complete and accurate 2020 Census count.**

- **Status:** GPS played a leading role on Governor Lujan Grisham's 2020 Census Complete Count Commission and provided consultation and operational support for complete count campaigns for the University of New Mexico, the NM Counts 2020 Census Funders Group and local and tribal governments throughout New Mexico. Despite numerous unanticipated challenges during the 2020 Census, GPS contributed to the most complete count possible for New Mexico and its local communities.

**Goal 2: Renew Data Entry agreement with the New Mexico Department of Transportation.**

- **Status:** A four-year, \$1,440,000 Data Entry agreement was executed in January of 2021. GPS was able to negotiate favorable updates in terms and an increase in the overall budget despite agency budget cuts throughout NM state government. There was an unfortunate lapse of nearly four months as UNM-OSP negotiated Intellectual Property and other terms with NMDOT and NMDoIT although with the contract now executed, GPS has secured four years of revenue for this project which will cover salaries for 3 FTEs and 5 student employees.

**Goal 3: Population estimates methodology improvements and release of state and county population projections.**

- **Status:** GPS successfully completed production of 2019 estimates and 2020-2040 projections for the State of New Mexico. GPS achieved greater process automation and created improvements to historical databases streamlining future workflows. Production was completed on time despite COVID-related challenges, and for the second year in a row our partners at NMDOH did not identify any errors in the estimates, providing evidence of an improved quality check process.

**Goal 4: Smooth transition of leadership after passing of GPS founder director, Dr. Adela Alcántara.**

- **Status:** In May of 2020 Robert Rhatigan was appointed permanent director of GPS with support from the OVPR, GPS advisory committee and the GPS staff.

# Membership of Advisory Committee

## Membership List

- Amy Ballard, Associate Dean, Central New Mexico Community College
- Renia Ehrenfeucht, Professor, UNM School of Architecture and Planning
- Allan Oliver, Executive Director, Thornburg Foundation
- Gabriel Sanchez, Professor, UNM Department of Political Science
- David Swanson, Professor Emeritus, University of Washington
  
- The Office of the Vice President for Research and the GPS Advisory Committee met in April of 2020 to discuss the appointment of Robert Rhatigan as permanent director of GPS.

# CY 2020 Highlights

- Played a leading role on Governor Lujan Grisham's 2020 Census Complete Count Commission and provided consultation and operational support for complete count campaigns for the University of New Mexico, the NM Counts 2020 Census Funders group and local and tribal governments throughout New Mexico.
- Successfully negotiated terms for a four-year \$1.4 million renewal of a Data Entry Contract with the New Mexico Department of Transportation (NMDOT) and renewed four annual contracts with NMDOT, New Mexico Department of Health, Carfax and Experian.
- Robert Rhatigan appointed as permanent director of GPS.
- Published *Population Change and Public Policy* book (Springer Publishing) from the Second Biennial Population and Public Policy Conference hosted by GPS in February 2019, with one staff member as co-editor, and another staff member among the authors.
- Developed, submitted, and received IRB approval for the UNM Grand Challenge Successful Aging Project. Covid-19 pandemic resulted in modification of project design, which received subsequent approval. Completed approximately one-half of scheduled interviews by EOY 2020.
- Participated in a National Academies of Science Committee on National Statistics working group for 2020 Census data quality.
- Rapid transition to COVID-safe practices and work from home for most staff. Completed all contract deliverables amid COVID disruptions for NMDOT Data Analysis contract and DOH Estimates contract.
- Migrated and updated the NMDOT crash database to UNM-IT hosted SQL Servers for faster speeds, better security and improved functionality.
- Participated in a statewide redistricting task force hosted by New Mexico First.

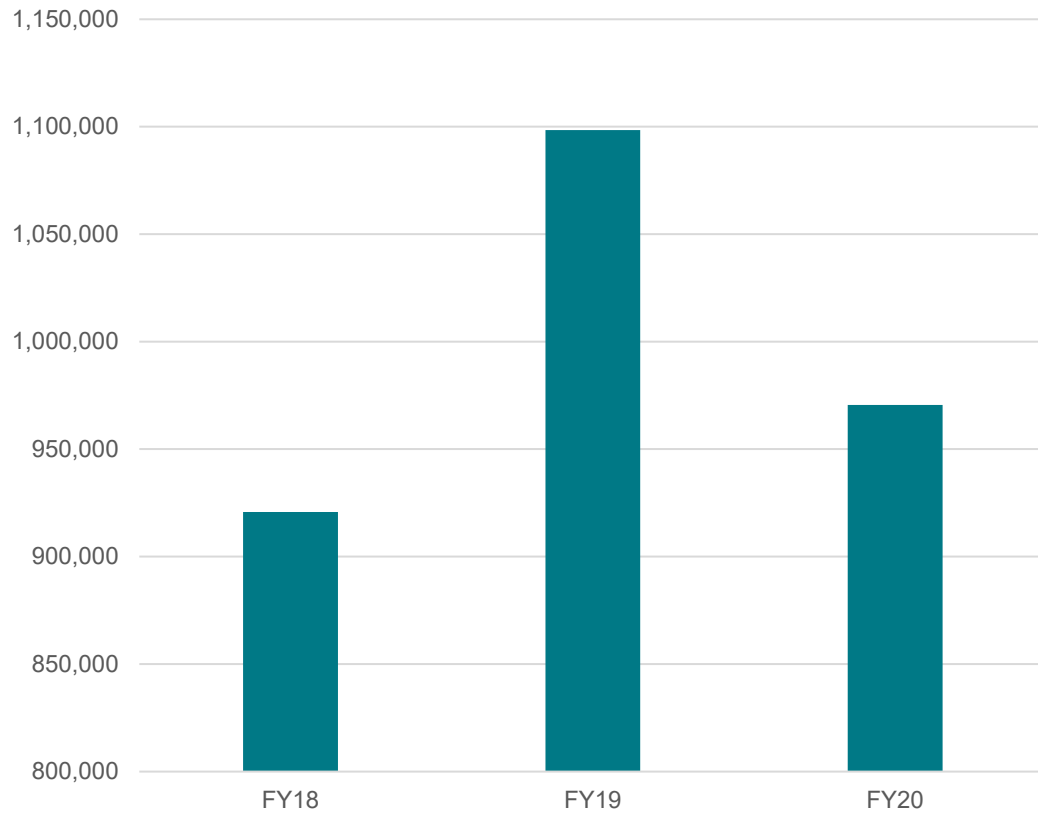
# Proposals & Awards



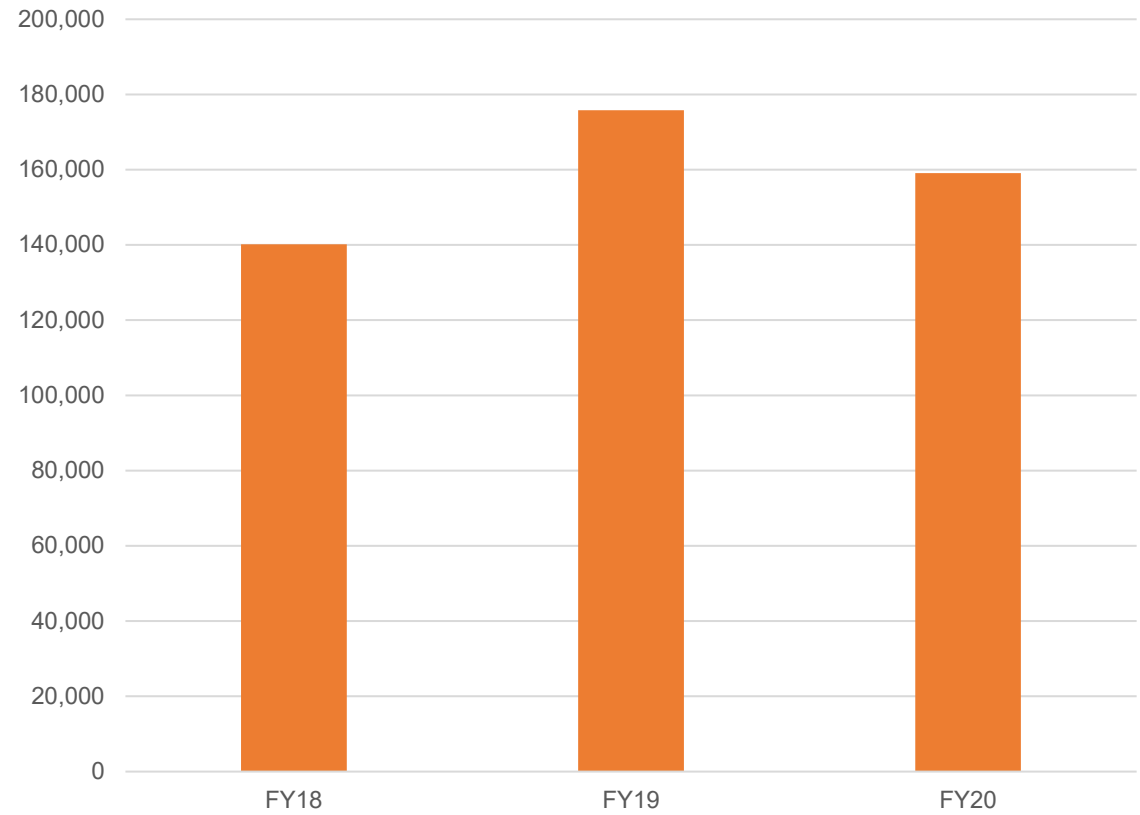
\*Four year cycle of GPS' recurring contracts with NMDOT causes spikes in annual proposals and awards.

# Research Expenditures and F&A

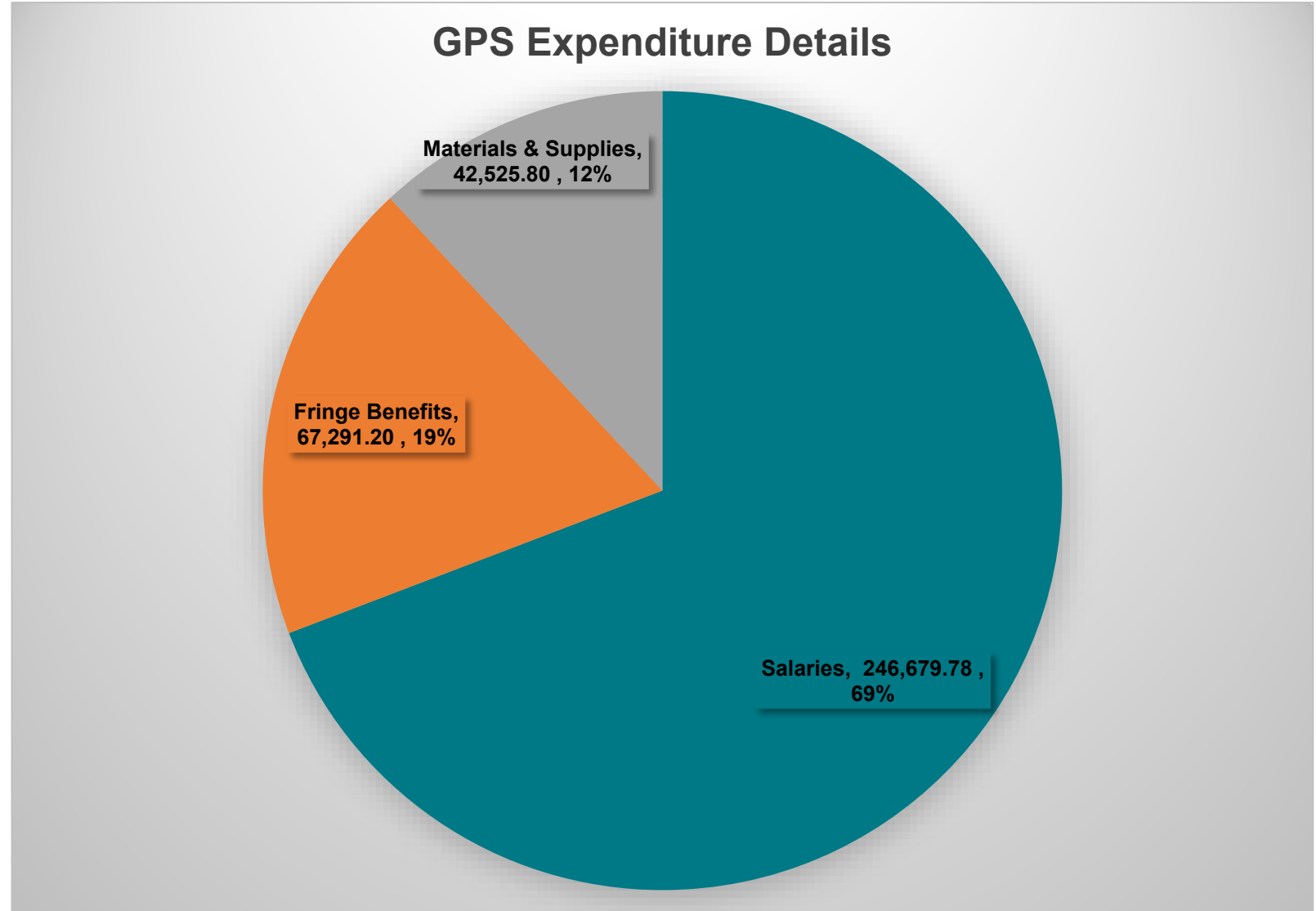
## Expenditures



## F&A



<b>FY20 Sources of Revenue</b>	
F&A Return	47,918.39
State Appropriation	281,300.00
Other	35,122.04
FY19 to FY20 Reserves	73,687.12
<b>Total</b>	<b>438,027.55</b>





# Research Center Impacts

## Resources provided for the campus

- Provides data for use in research by other institutes on campus.
- Provides demography lectures as part of CRP planning course and other guest lectures as requested.
- Consults with students and faculty members on population topics.
- Provides employment experience and training for students on GIS, database management, programming and more.

## Resource for the state/region

- Provides New Mexico traffic crash data, analysis and publications.
- Provides state and county population projections by age and sex.
- Provides small-area population estimates by age, sex, race/ethnicity.
- Provides expert opinion on socioeconomic and demographic issues.
- Serves as liaison to the US Census Bureau.
- Advises state and local governments on census programs and data.
- Provides expertise on redistricting reform, criteria and data sources.
- Provides crash data analysis for the New Mexico state legislature, the New Mexico Highway Safety Plan, and more.

# Return on Investment

- Employed and trained 6 Undergraduate students
- GPS was awarded 4 contracts for a total of \$765,428
- Publications and Presentations
  - 2 Peer-reviewed articles:
    - Crapo, J. S., Barrett, T. S., Bradford, K., Miller, J. A., & Higginbotham, B. J. (2020). Couple relationship education outcomes predicted by family life stage and traditionality. *Contemporary Family Therapy*, 1-14. DOI: 10.1007/s10591-020-09541-x
    - Crapo, J.S., Miller, J.A., \*Rhodes, M., Bradford, K, & Higginbotham, B. (2020). Couple-level patterns of disclosure process beliefs and their association with marital satisfaction. *Marriage and Family Review*, 1-20.
  - 1 Book co-edited by GPS staff and includes an article by another of GPS's staff
    - Jivetti B., Hoque M.N. (eds) Population Change and Public Policy. Applied Demography Series, vol 11. Springer, Cham. (2020).
    - Skowron, Maureen, Ways to Evaluate Redistricting Plans. Population Change and Public Policy. Applied Demography Series, vol 11. Springer, Cham. (2020).
  - 85 Reports
    - 2019 New Mexico Small Area Population Estimates
    - NM Traffic Crash Annual Report, 2018.
    - NM DWI Report, 2018.
    - Community crash reports for all 33 counties and over 50 municipalities in the state.
  - 3 conference presentations, weekly presentations to Governor's Census Commission, 1 presentation to a NM State Legislative Committee, and 2 presentations to government agencies.
- Submissions: 5 manuscripts to refereed journals, 6 funding proposals, and 2 conference presentations
- GPS and GPS staff referenced in at least 10 news articles, including by the ABQ Journal, Durango Herald, KUNM, Science magazine and Talking Points Memo. Appeared on radio (KKOB, KUNM, KURU) and television (KOB) to promote and discuss the 2020 Census.

- Disparate backgrounds and expertise of staff members.
- Long-term records of crash data and population data.
- Recognized expert on New Mexico’s demographics.
- Experienced working with multiple state agencies and private entities.
- Only entity in state that produces state and county population projections by age and sex.
- Sustainable, recurring funding streams.

**STRENGTHS**

- Lack of name and brand recognition.
- Lack of diverse fiscal resources.
- Contract limitations on publishing restricts dissemination of research.
- Lack of funding for peer-reviewed research.

**WEAKNESSES**

- Collaborate with other departments to offer courses in traffic safety and demographics.
- Develop interactive mapping and data display of demographic and traffic crash data.
- With quality of 2020 Census data in question there could be increased importance of alternative demographic data sources.
- Leverage recognition from active role in New Mexico’s 2020 Census activities into additional contracts with state government.
- Pursue more applied research using Traffic and Criminal Software (TraCS).
- Develop applications using artificial intelligence.

**OPPORTUNITIES**

- Slow reaction time from state agencies to finalize contracts.
- Compensation doesn’t keep pace with inflation, while a competitive job market increases competition which could lead to turnover in key positions.
- UNM IT costs are increasing, but service quality and timeliness are decreasing.
- Existence of departmental silos restricts collaborative research across UNM.
- Negative perception of applied research.

**THREATS**



# Looking Ahead to 2021

- Evaluation of 2020 Census data and possible count challenges on behalf of state and local governments.
- Completion of Successful Aging pilot research project. Use results to seek additional funding to conduct another more in-depth study of the senior Vietnamese population and other Asian groups.
- Begin negotiation for renewal of 4-year data analysis contract with Department of Transportation.
- Catch up on traffic crash data entry, after 4-month delay in contract renewal.
- Renewal of the Department of Health small-area estimates contract.
- Further automation of crash database quality checks.
- Further automation of DWI and other NMDOT reports.
- Engage with UNM Communications and Marketing team to develop and implement an improved marketing strategy.
- Seek funding for interactive traffic safety data web tool and a National Neighborhoods Indicator Partnership hub for Albuquerque.
- Downsizing of space and migration to new offices for some staff.
- Maintaining COVID-safe work practices, with most staff working from home and students on staggered work schedules to prevent overlap of in-office work hours.

## Summary

GPS is in a strong position with stable sources of recurring revenue and staff retention in all key positions despite numerous challenges in 2020. Though the 2020 Census count is now complete, GPS will continue to play an important role in data evaluation in order to fully understand the implications for New Mexico and through participation in the census challenge process. Within our Traffic Research Unit, a renewal of the data entry agreement with NMDOT was executed in early 2021 ensuring over \$1.4 million in revenue over the next four years. In 2021, ever greater automation of key operations will allow staff to focus on higher-level initiatives, improved marketing to lead to more contracts, and strengthening its research and analysis capabilities to improve public decision making. GPS is positioned well for the future after carving out niche areas of research conducted on behalf of the State of New Mexico.