

FORM TECH-6 CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

1. **Proposed Position** [only one candidate shall be nominated for each position]: Hydrologist_____

2. **Name of Firm** [Insert name of firm proposing the staff]: Hydrau-Tech, Inc. _____

3. **Name of Staff** [Insert full name]: Jose D. Salas_____

4. **Date of Birth:** 12/12/1943_____ **Nationality:** American_____

5. **Education** [Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]:

B.S.C.E. National University of Engineering, Lima, Perú (1961 - 1964)

C.E. National University of Engineering, Lima, Perú (1964 - 1965)

Major: Water Resources Engineering

M.S. Colorado State University, Fort Collins, Colorado (1966 - 1967)

Major: Hydraulics

Ph.D. Colorado State University, Fort Collins, Colorado (1969 - 1972)

Major: Hydrology and Water Resources

6. **Membership of Professional Associations:**

American Society of Civil Engineers (ASCE),

American Geophysical Union (AGU)._____

7. **Other Training** [Indicate significant training since degrees under 5 - Education were obtained]: _____

8. **Countries of Work Experience:**

USA: Colorado State University (1976-present), University of Pittsburgh (1972-1973);
Federal Highway Administration (1978); Tampa Bay Water, Tampa (2003)

ITALY: University of Genoa (1985); WARREDOC, Perugia (1985-1995); Politecnico di
Milano (1992); University of Catania, Sicily (1994, 2000)

SPAIN: Polytechnical Univ. of Valencia (1985)

SWITZERLAND: ETH, Zurich (2001, 2002, 2003, 2004, 2006)

PORTUGAL: Technical University of Lisbon (1985)

INDIA: Central Water Commission, New Delhi (1985)

EGYPT: Water Research Center, Cairo (1990, 1991)

PHILIPPINES: National Irrigation Administration, Manila (1981)

ARGENTINA: University of Litoral, Santa Fe (1995, 1997); University of San Juan (1997)

ECUADOR: University of Guayaquil, Guayaquil (1978)

VENEZUELA: Interamerican Center of Water and Land Development (CIDIAT),
Merida (1974, 1976);

Interamerican Center for Regional Development, Maracaibo, Venezuela (1976)

GUATEMALA: University of San Carlos (1978)

PERU: National University of Engineering (UNI), Lima (1968, 2004); National

Agrarian University (UNA), Lima (1975, 2000); Ministry of Agriculture, Lima, Perú (1978, 1980, 1999).

9. Languages [For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]: English (good in speaking, reading and writing), Spanish (good in speaking, reading and writing)

10. Employment Record [Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.]:

From [Year]: 1976 To [Year]: 2008_____

Employer: Colorado State University_____

Positions held: Professor of Civil and Environmental Engineering.

<u>July 1984 - 2008</u>	Professor of Civil Engineering, Colorado State University.
<u>Jan. 2003 – Dec. 2006:</u>	Borland Professor of Hydrology & Water Resources, Colorado State Univ.
<u>Jan. 2003–July 2003:</u>	Visiting Professor, Institute of Hydromechanics and Water Resources Management, ETH, Zurich, Switzerland.
<u>Sept. 2001 - Present:</u>	Division Leader, Water Resources, Hydrologic & Environmental Sciences Division, Department of Civil Engineering, Colorado State University.
<u>Nov. 1995 - May 1998:</u>	Invited Professor, Canadian National Institute of Scientific Research, University of Quebec, Canada.
<u>June 1994:</u>	Visiting Contract Professor, Dept. of Hydraulics, University of Catania, Italy.
<u>Jan. 1992 - July 1992:</u>	Visiting Contract Professor, Dept. of Hydraulics, Politecnico di Milano, Italy.
<u>Jan. 1986 - 1998:</u>	Program Coordinator, Hydrologic Science and Engineering Program, Department of Civil Engineering, Colorado State University.
<u>Aug. 1985 - Dec. 1986:</u>	Visiting Professor, Department of Civil Engineering, Polytechnical University of Valencia, Spain.
<u>Jan. 1985 - June 1985:</u>	Visiting Contract Professor, Istituto di Idraulica, University of Genova, Italy.
<u>Oct. 1976 - June 1984:</u>	Associate Professor of Civil Engineering, Colorado State University.
<u>Feb. 1976 - Sep. 1976:</u>	Visiting Associate Professor, Interamerican Center of Water and Land Development (CIDIAT), Merida, Venezuela.
<u>Aug. 1973 - Nov. 1975:</u>	Research Engineer, Divisions of System Analysis and Hydrologic Studies, General Office of Irrigation, Ministry of Agriculture, Lima, Perú.
<u>May 1973 - July 1973:</u>	Research Associate, Hydrology & Water Resources, Colorado State Univ.
<u>Sep. 1972 - Apr. 1973:</u>	Visiting Assistant Professor of Civil Engineering, University of Pittsburgh.
<u>June 1972 - Aug. 1972:</u>	Research Associate, Hydrology & Water Resources, Colorado State Univ.
<u>Oct. 1969 - May 1972:</u>	Research Assistant, Hydrology & Water Resources, Colorado State Univ.
<u>Jan. 1968 - Aug. 1969:</u>	Research Engineer, National Hydraulics Laboratory, Lima, Perú.
<u>Jan. 1966 - Aug. 1966:</u>	Research Engineer, National Hydraulics Laboratory, Lima, Perú.
<u>Jan. 1964 - Dec. 1965:</u>	Research Assistant, National Hydraulics Laboratory, Lima, Perú.

<p>11. Detailed Tasks Assigned</p> <p>Hydrologist</p> <p>Hydrology of arid and mountainous regions, stochastic hydrology, time series, missing or incomplete hydrological data.</p>	<p>12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned</p> <p><i>[Among the assignments in which the staff has been involved, indicate the following information for those assignments that best illustrate staff capability to handle the tasks listed under point 11.]</i></p> <ol style="list-style-type: none"> 1. Principal Investigator on “Generating Stochastic Flows for the Truckee River System”, <u>USBR, Department of Interior</u>, 2007-2008. 2. Principal Investigator on “Predictability of the Upper Colorado River Streamflows”, <u>Colorado Water Resources Research Institute</u>, 2007-2008, Dr. B. Rajagopalan from CU is Co-Principal Investigator.. 3. Principal Investigator on “Development of Stochastic Hydrology for the Colorado River System”, <u>USBR, Department of Interior</u>, 2005-2007. 4. Principal Investigator on “Predicting the Severity of Low Flows and Droughts for Agricultural Systems in Colorado”, <u>Colorado Agricultural Experiment Station</u>, 2004-2007. 5. Principal Investigator on “Preliminary Research for the Development of Stochastic Hydrology for the Colorado River System”, <u>USBR, Department of Interior</u>, 2004-2005. 6. Principal Investigator on “Stochastic Analysis, Modeling, and Simulation”, <u>USBR, Department of Interior</u>, 2002-2004, 7. Principal Investigator on “Stochastic Modeling and Simulation of the Great Lakes Net Basin Supplies”, Contract NA17RJ1228, GLERL, CIRA/NOAA, <u>Department of Commerce</u>, 2002-2003. 8. Principal Investigator on “Stochastic Analysis, Modeling, and Simulation”, <u>USBR, Department of Interior</u>, 2000-2002. 9. Principal Investigator on “Quantifying Space-Time Variability in Agricultural Landscapes”, <u>USDA Agriculture Research Service</u>, 1999-2004, Dr. J. Ramirez is Co-Principal Investigator. 10. Principal Investigator on "Uncertainty and Risk Analysis Under Extreme Hydrologic Events", <u>National Science Foundation</u>, 1996-2000. Dr. D.C. Boes is Co-Principal Investigator. 11. Principal Investigator on “Synthetic Streamflow
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	<p>Generation and Forecasting”, <u>BPA, Department of Energy, 1998-2001,</u></p> <p>12. Principal Investigator on “Stochastic Analysis, Modeling, and Simulation”, <u>USBR, Department of Interior, 1998-2000.</u></p> <p>13. Principal Investigator on “Predictability of Extreme Hydrologic Events Related to Colorado’s Agriculture”, <u>Colorado Agricultural Experiment Station, 1998-2001,</u> Professors J. Ramirez and J. Warner are Co-Principal Investigators.</p> <p>14. Principal Investigator on "Research Workshop on the Hydrometeorology, Impacts, & Management of Extreme Events", <u>National Science Foundation, 1995-1998.</u></p> <p>15. Principal Investigator on "Field to Farm to Ecosystem Scale Decision Support Models", <u>USDA Agriculture Research Service, 1994-1999, Dr. J. Ramirez is Co-Principal Investigator.</u></p> <p>16. Co-Principal Investigator on "Hydrological Modeling of the Maule River Basin, Chile", <u>Catholic University of Chile, 1997-1999,</u> Dr. G. Diaz is the Principal Investigator.</p> <p>17. Principal Investigator on "Flow Prediction for Crater Lake National Park", Water Resources Division, <u>National Park Service, 1996-1997.</u></p> <p>18. Principal Investigator on "Affiliation Program in Water Resources and Environmental Engineering", <u>U.S. Information Agency, 1993-1998,</u> D. Hendricks and C. Shackelford are Co-Principal Investigators.</p> <p>19. Co-Principal Investigator on "Flow Indexes and Watershed Modeling", Water Resources Division, <u>National Park Service, 1995-1996,</u> Dr. G. Diaz is the Principal Investigator.</p> <p>20. Principal Investigator on "Modeling and Simulation of the Upper Nile River System", <u>AID/Utah State University/Egyptian Ministry of Public Works and Water Resources, 1994-1995. Dr. J.A. Ramirez is Co-Principal Investigator.</u></p> <p>21. Principal Investigator on "Stochastic Modeling and Simulation Computer Package for Hydrology," <u>U.S. Bureau of Reclamation, 1992-1998.</u></p> <p>22. Principal Investigator on "Stochastic Modeling, Simulation, and Forecasting of Hydrometeorological Variables of the Great Lakes System", <u>Great Lakes Environmental Research Laboratory, NOAA, 1994-1995.</u></p> <p>23. Principal Investigator on "Hydrological Investigations in</p>
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	<p>Support of Federal Reserved Water Rights in National Parks", <u>U.S. National Park Service</u>, 1993-1994. G.E. Diaz is Co-Principal Investigator.</p> <p>24. Principal Investigator on "Modeling and Simulation of the Upper Nile River System", <u>U.S. Bureau of Reclamation-AID-Egyptian Ministry of Public Works and Water Resources</u>, 1993-1994. Dr. J.A. Ramirez is Co-Principal investigator.</p> <p>25. Principal Investigator on "Regional Flood Hazard Analysis," <u>National Science Foundation</u>, 1991-1994. Dr. D.C. Boes is the other Co-Principal Investigator and Dr. E. Wohl is an Investigator in this project.</p> <p>26. Principal Investigator on "Impact of Climatic Changes on Colorado's Agricultural Water Supplies and Demands," <u>Colorado Agricultural Experiment Station</u>, J.A. Ramirez is Co-Principal Investigator, 1992-1995.</p> <p>27. Principal Investigator on "Great Plains Research," <u>USDA Agriculture Research Service</u>, 1992-1993.</p> <p>28. Principal Investigator on "Hydrological and Climatological Model Development, Testing and Documentation," <u>Department of Agriculture, ARS</u>, 1989-1994.</p> <p>29. Principal Investigator on "Modeling of Seasonal Intermittent Hydrologic Processes," <u>U.S. Geological Survey</u>, 1989-1992.</p> <p>30. Principal Investigator on "Prediction of Droughts in Agricultural Regions of Colorado," <u>Colorado Agricultural Experiment Station</u>, 1989-1992.</p> <p>31. Principal Investigator on "U.S. - Italy Cooperative Research on Prediction of Floods and Precipitation Events," <u>National Science Foundation</u>, 1988 -1991.</p> <p>32. Principal Investigator on "Training Program for the Ministry of Public Works and Water Resources, Egypt," <u>U.S. Bureau of Reclamation-AID</u>, 1991.</p> <p>33. Principal Investigator on "Forecasting Streamflow for Colorado River Systems," <u>Colorado Water Resources Research Institute</u>, 1990-1991.</p> <p>34. Principal Investigator on "Improving Streamflow Forecasts for Colorado River Systems," <u>Colorado Water Resources Research Institute</u>, 1989-1990.</p> <p>35. Co-Principal Investigator on "Simulation and Optimization of Operations of the High Aswan Dam," <u>U.S. Bureau of Reclamation - AID - Egyptian Ministry of Public Works and Water Resources</u>. Professors J. Labadie and D. Fontane are the other Co-Principal</p>
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	<p style="text-align: center;">Investigators, 1990.</p> <ol style="list-style-type: none">36. Co-Principal Investigator on "Validation Studies on Indexed Sequential Hydrological Modeling in the Colorado River System," <u>Western Area Power Administration</u>. Professors J. Labadie and D. Fontane are the other Co-Principal Investigators, 1989-1990.37. Principal Investigator on "Jigüey and Aguacate Hydrologic Study," <u>EPSA/LABCO Dominican Republic</u>, 1989-1990.38. Principal Investigator on "Prediction of Flood Hazards Based on Joint Distribution Functions," <u>National Science Foundation</u>. Dr. D. C. Boes is the other Co-Principal Investigator, 1987-1989.39. Principal Investigator on "Improved Methods for Regional Flood Frequency Analysis," <u>U.S. Geological Survey</u>, 1986-1989.40. Principal Investigator on "Characterizing the Properties of Precipitation for Agricultural Areas in Colorado," <u>Colorado State University Agricultural Experiment Station</u>, 1986-1989.41. Principal Investigator on "Operational and Safety Studies of the Valdesia Reservoir System," Dominican Republic Government and the Interamerican Institute for Cooperation on Agriculture, <u>World Bank Loan</u>. H.W. Shen was Co-Principal Investigator and J. Labadie and D. Fontane were Investigators of the project, 1984-1986.42. Principal Investigator on "Research Visit to the University of Valencia," <u>U.S.-Spain Joint Committee for Cooperation and the National Science Foundation</u>, 1985.43. Principal Investigator on "Stochastic Modeling of Geophysical Time Series," <u>National Science Foundation</u>. Dr. D. C. Boes was the other Co-Principal Investigator, 1982-1984.44. Principal Investigator on "Research Oriented Workshop on Experimental Watersheds," <u>National Science Foundation</u>. Dr. F. Smith was the other Co-Principal Investigator, 1983.45. Principal Investigator on "Scientific Visit To Uruguay: Design of Experimental Watersheds," <u>National Science Foundation</u>. Dr. F. Smith was the other Co-Principal Investigator, 1982.46. Principal Investigator on "Stochastic Mixture-Models in Hydrologic and Geophysical Series," <u>National Science Foundation</u>. Dr. Duane C. Boes was the other Co-Principal Investigator, 1978-1980.
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	<p>47. Investigator on "Prediction of Floods from Small Watershed," CSU Experiment Station. Dr. V. Yevjevich was the Principal Investigator, 1979-1981.</p> <p>48. Co-Principal Investigator on "Conference on Drought Research Needs," <u>National Science Foundation</u>, 1977-1978. Dr. Vujica Yevjevich was the Principal Investigator.</p> <p>49. Co-Principal Investigator on "Transfer of Modern Techniques for the Analysis of Water Resources Systems," <u>Ministry of Agriculture of Perú-AID- CSU</u>. Dr. V. Yevjevich was the other Co-Principal investigator, 1976.</p> <p>50. Investigator on "Objective Functions and Operational Rules of Storage Reservoirs," <u>Office of Water Resources Research and Technology</u>. Dr. Vujica Yevjevich was the Principal Investigator, and Dr. Warren A. Hall was the co-principal investigator, 1978-1980.</p> <p>51. Investigator on "Conjunctive Water Use of Large Scale Complex Water Resources Systems," <u>NSF U.S.-Spanish Cooperative Project</u>. Dr. V. Yevjevich was the Principal Investigator, 1978-1983.</p> <p>52. Investigator on "Floods and Droughts in Small Watershed and Their Impacts on Colorado Energy Sources," <u>CSU Experiment Station</u>. Dr. H.W. Shen was the Principal Investigator, 1981-1985.</p> <p>53. <u>March-October 2007</u>: Consultant of the World Institute for Disaster Management, Inc. for "Development of Drought Hazard Maps for Saint Lucia".</p> <p>54. <u>March-June 2004</u>: Consultant of HydroQuebec for the stochastic analysis and modeling of the Great Lakes Net Basin Supplies and the Ottawa River streamflow system.</p> <p>55. <u>January 2004</u>: Consultant of RTI and Denver Water for Drought Analysis of the South Platte River System.</p> <p>56. <u>Sept-Oct. 2003</u>: Consultant of Tampa Bay Water, Training on Time Series Analysis and Modeling for Hydrologic and Environmental Data, in collaboration with Utah State University, IRI, Columbia University, and Vydia Inc.</p> <p>57. <u>Sept-Oct. 2002</u>: Consultant of SEDAPAL/World Bank for Assessing Water Supplies in the Rimac-Marcapomacocha system.</p> <p>58. <u>Jan-May 2002</u>: Consultant of CH2M HILL, Tampa, Florida for reviewing the impact of groundwater pumping on surficial aquifer and wetlands water levels.</p>
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	<p>59. <u>Nov.2001 – present</u>: Consultant of HydroQuebec for the stochastic analysis and modeling of the Great Lakes Net Basin Supplies and the Ottawa River streamflow system.</p> <p>60. <u>Sep 2000-Nov. 02</u>: Consultant of HydroQuebec, Canada on Stochastic Simulation Studies for a Large Scale River System in North Quebec Region.</p> <p>61. <u>Jan-June 2000</u>: Consultant of Simons and Associates for Hydrologic Analysis Associated with Development of Input for Operational Modeling for the Snake River Project.</p> <p>62. <u>Jan.-Mar. 2000</u>: Consultant of Ayres Associates for Stochastic Modeling of the Upper Colorado River Basin.</p> <p>63. <u>May-Nov. 1998</u>: Consultant of Gregory Morris Co., San Puerto Rico for Drought Analysis of the Fajardo River, P. Rico.</p> <p>64. <u>July-Aug. 1998</u>: Consultant of the University of Colombia at Medellin on Feasibility of Flow Forecasting System for OPM, Medellin.</p> <p>65. <u>May. 1994-Mar. 1997</u>: Consultant of Ecole Polytechnique, Montreal, Canada for Hydrologic Forecasting Studies for Reservoir Inflows for ALCAN, Canada.</p> <p>66. <u>Sept. 1996</u>: Consultant of Waterborne Environmental Inc., Virginia, for review of progress report on Diquat Risk Assessment for Lakes.</p> <p>67. <u>Apr.-Jul., 1996</u>: Consultant of West Coast Regional Water Supply Authority, Clearwater, Florida, for the Review of Statistical Analysis of Floridan Aquifer Heads and Lake Levels.</p> <p>68. <u>Apr.-May, 1996</u>: World Bank Expert Panel for Review of Hydrologic Studies of the Chillon River, Peru.</p> <p>69. <u>Apr.-Dec. 1994</u>: Consultant of HydroQuebec for Stochastic Simulation Studies of the Ottawa River System</p> <p>70. <u>Oct.1991-July 1992</u>: Member of the Expert Committee of HydroQuebec, Canada for Flood Studies in the Saint Lawrence River.</p> <p>71. <u>Sept.-Dec. 1991</u>: Consultant of George Sabol Consulting Engineering, Inc. on Flood Frequency Analysis for the Arizona Transportation Research Center.</p> <p>72. <u>Aug.-Dec. 1991</u>: Consultant of Wright Water Engineers, Inc. on "Statistical Frequency Analysis of Flow Data for Clear Creek, Colorado."</p> <p>73. <u>Aug.-Dec. 1991</u>: Consultant of Resource Consultants Inc.</p>
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	<p>on Drought Study for the City of Greeley.</p> <p>74. <u>Aug. 1991</u>: Consultant of FAO, United Nations, Hydrologic Studies of the Parana River, Parana Medio Project, Argentina.</p> <p>75. <u>April 1990</u>: Consultant of Wright Water Engineers, Inc. for review of hydrological statistical analysis of the Arkansas River, Colorado.</p> <p>76. <u>March 1989</u>: Consultant of FAO, United Nations, Hydrologic Studies of the Parana River, Parana Medio Project, Argentina.</p> <p>77. <u>April-Jul. 1988</u>: Consultant of Northern Colorado Water Conservancy District, development of software for hydrologic analysis, Loveland, CO.</p> <p>78. <u>March 1988</u>: Consultant of CID/AID for identifying needed studies for water resources management in the Nizao basin, Dominican Republic.</p> <p>79. <u>Jan. 1988</u>: Consultant of ACRES International, for the Review of Stochastic Streamflow Modeling and Generation of an African River System, Niagara Falls, Ontario, Canada.</p> <p>80. <u>July, 1987</u>: Consultant of W.W. Wheeler and Assoc.Inc., for the Statistical Study of Castle Rock Lawn Irrigation Return Flows, Englewood, Colorado.</p> <p>81. <u>Nov.1985</u>: Consultant to the National Civil Engineering Laboratory of Portugal on Conceptual Modeling of Watersheds, NATO Project, Portugal.</p> <p>82. <u>Sept.-Dec., 1984</u>: Consultant of Northwest Hydraulics Consultants Inc. for the Stochastic Modeling and Generation of the Inflows to the H. Hanson Reservoir, Seattle, Washington.</p> <p>83. <u>June-Oct. 1984</u>: Consultant of Resource Consultants Inc. for the Stochastic Modeling and Drought Analysis of the Cache La Poudre River System, Fort Collins, Colorado.</p> <p>84. <u>Aug. 1981</u>: Consultant of the Interamerican Institute for Cooperation on Agriculture (IICA), to implement a computer watershed model, National Institute of Water Resources Development of the Dominican Republic.</p> <p>85. <u>Aug. and Nov. 1980</u>: Consultant of the Interamerican Institute of Agricultural Sciences (IICA), Division of Hydrology of the National Institute of Water Resources Development of the Dominican Republic.</p> <p>86. <u>Nov. 1978, Feb. 1979 & Jan. 1980</u>: CID/CSU - ATA/CLASS Consultant on Hydrology for the Plan MERIS I Project, Ministry of Agriculture, Perú.</p>
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	<p>87. <u>Dec. 1974-June 1975</u>: Hydrologic studies for planning and design of fishing factories for Romani Consulting Engineers, Lima, Perú.</p> <p>88. <u>Oct. 1974-Nov. 1974</u>: Consultant on research in hydrology and water resources for the Interamerican Center for Water and Land Development, CIDIAT, Merida, Venezuela.</p> <p>89. <u>Jan. 1974-Sept. 1974</u>: Structural design of small buildings for private parties in Lima, Perú.</p> <p>90. <u>Jan. 1963-Dec. 1963</u>: Structural design and drawing of reinforced concrete structures for Marquina Construction Engineers, Lima, Perú.</p> <p>91. <u>Jan. 1962-March 1962</u>: Surveying and development of topographic maps for some private parties at Ayacucho, Perú.</p>
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