

## **Post Oak Savannah GCD Intern Job Description**

The Post Oak Savannah GCD Intern will support groundwater management efforts through current district programs and gain exposure through Education and Outreach, Regulatory Compliance, and Water Resource Management activities. Activities will include learning to monitor groundwater levels as per USGS approved methodologies, collecting and recording data within the district's database, using GIS tools, aiding in public education and outreach functions including Rainwater Harvesting and Groundwater Summit, review of permittees and production related information, and develop knowledge and understanding of district, regional, and state water policy, population impacts, and the balance of upholding and protecting private property owner rights.

### **Common Responsibilities & Duties**

- **Field Data Collection:** Monitoring groundwater wells, collecting water level measurements, and inputting data into the Halff Database
- **Technical Support:** Assisting with GIS mapping, spatial data analysis, and technical reports
- **Regulatory Compliance:** Reviewing well drilling applications and conducting site inspections to ensure compliance with District rules
- **Outreach & Education:** Supporting community events, educational exhibits, and creating educational content
- **Administration:** Preparing reports, digitizing records, and updating websites

### **Requirements & Qualifications**

- **Education:** Enrolled in or recently graduated from a college/university with a major in Environmental Science, Geology, Biology, Agriculture, or Water Policy
- **Skills:** Proficiency in Microsoft Office, Geographic Information Systems (GIS) software
- **Physical Ability:** Ability to perform field work in various weather conditions, including lifting equipment
- **Transportation:** Valid driver's license and reliable transportation for field visits.

### **Internship Goal**

- Assisting staff in activities which lead to hands-on experience in groundwater science and policy, leading to roles in state agencies, local government, or private environmental consulting firms

# 14-Week Internship Program Outline: Groundwater Conservation District

## **Week 1 – Orientation & District Overview**

**(5/4 – 5/8)**

- Introduction to district mission, policies, and service area
  - Overview of groundwater basics (aquifers, recharge, flow)
  - Safety training (field + office), GIS, databases, monitoring equipment
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## **Week 2 – Groundwater Science Fundamentals**

**(5/11 – 5/15)**

- Hydrogeology basics (aquifer types, confining layers)
  - Review of district reports and management plans
  - Field Trip to Intera to visit district's hydrogeologist and technical staff
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## **Week 3 – Monitoring Wells & Field Methods**

**(5/18 – 5/22)**

- Types of monitoring wells and their purposes
  - Hands-on: measuring water levels, Data Recording Protocols
  - Equipment use (sounders, pressure transducers)
  - Field Trip to Brazos Valley GCD
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## **Week 4 – Water Quality Basics**

**(5/25 – 5/29)**

- Introduction to groundwater chemistry and well sample reports
  - Sampling techniques and contamination prevention
  - Field sampling exercise, Introduction to Indicator Bacteria
  - Geophysical Log Review
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**Week 5 – Data Management & QA/QC****(6/1 – 6/5)**

- Data entry and database systems
  - Quality assurance/quality control practices
  - Reviewing historical groundwater data, intro to database tools
  - Attend GMA-12 Meeting
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**Week 6 – GIS & Mapping****(6/8 – 6/12)**

- Mapping wells, aquifers, and district boundaries
  - Create simple groundwater contour maps
  - Intro to spatial analysis
  - Field Trip to Middle East Trinity GCD
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**Week 7 – Regulations & Permitting****(6/15 – 6/19)**

- Overview of groundwater law (state + local rules)
  - Permitting process for wells
  - Review real permit applications
  - Well Inspections and Environmental Day/Field Trip to Burleson County
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**Week 8 – Water Use & Conservation****(6/22 – 6/26)**

- Agricultural, municipal, and industrial water use
  - Conservation strategies and best practices
  - Assist with conservation program materials, evaluate water use trends
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**Week 9 – Aquifer Testing & Pumping Impacts****(6/29 – 7/3)**

- Basics of pump tests and drawdown
  - Analyze simple datasets
  - Field Trip to Lost Pines GCD
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**Week 10 – Stakeholder Engagement****(7/6 – 7/10)**

- Working with landowners, municipalities, and stakeholders
  - Public communication strategies
  - Assist with outreach materials, aid with Groundwater Summit Planning
  - Coordinate with local businesses to share Groundwater Summit Postings
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**Week 11 –Education and Outreach****(7/13 -7/17)**

- Promote 4-H, H2O Scholarship Program
  - Work on website related workflows and updates
  - Support Groundwater Summit Planning, Sponsorship Booths, and Banners
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**Week 12 – Advanced Data Analysis****(7/20 – 7/24)**

- Time series analysis of groundwater levels
  - Trend identification
  - Graphing and reporting results
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**Week 13 – Policy & Management Strategies****(7/27 – 7/31)**

- Groundwater management planning
  - Sustainability goals (Desired Future Conditions)
  - Evaluate policy impacts
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**Week 14 – Groundwater Summit Week****(8/3 – 8/7)**

- Work with Education and Outreach Coordinator
  - Work on website pages and information
  - Record Groundwater Summit During Event
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