# Phase 1 Sprint Plan – AWS-Centric & Hybrid AWS+n8n Builds

Timeline: ~12 weeks (6 sprints @ 2 weeks each)

Goal: Deliver fully functional Phase 1 scope for Central Region.

## Sprint 0 – Pre-Work (Week 0)

- Finalize technical architecture & AoA selection.  
- Set up AWS accounts, GovCloud VPCs, IAM roles, and networking.  
- Deploy n8n (for hybrid build) in AWS EC2 or ECS (secure access).  
- Confirm Google Workspace API & NWS Connect API credentials.  
- Approval: Architecture & environment readiness.

## Sprint 1 – Data Ingestion & Normalization

- AWS-Centric: Lambda + API Gateway endpoint to pull Google Sheets via Sheets API. Store raw JSON in S3.  
- Hybrid: n8n workflow to pull from Google Sheets → send to AWS Lambda for normalization.  
- Build deterministic parser for forecast formats.  
- Internal test with sample WFO sheets.  
- Approval: Internal QA + client review of sample ingestion.

## Sprint 2 – Central Coverage Register

- Create DynamoDB schema for normalized coverage data.  
- Build Lambda functions to detect coverage gaps (rules-based).  
- Basic React UI to display coverage register (table format).  
- Integration test: ingestion → register population.  
- Approval: Client review of coverage register display.

## Sprint 3 – Mutual Aid Drafting

- AWS-Centric: Optional Bedrock integration for draft request text.  
- Hybrid: n8n triggers OpenAI/Gemini for AI drafting.  
- Implement rules to keep drafts deterministic where possible.  
- Store drafts in DynamoDB linked to coverage gaps.  
- Approval: Client review of draft request accuracy.

## Sprint 4 – IAP Generation & Map Display

- Generate IAP from structured data (docx/PDF) using Lambda.  
- Store in S3 and link to UI.  
- Mapbox integration to show WFO coverage on a map.  
- NWS Connect API push.  
- Approval: Client review of IAP template output & map accuracy.

## Sprint 5 – Approvals & Human-in-the-Loop

- Build review/approval workflow in UI (roles: WFO lead, RFC coordinator).  
- Audit trail for approvals.  
- Real-time status view in UI.  
- End-to-end integration testing.  
- Approval: Stakeholder sign-off on process flow.

## Sprint 6 – UAT & Go-Live

- User Acceptance Testing with selected WFOs in Central Region.  
- Bug fixes & polish.  
- Documentation & training session.  
- Final go-live deployment.

## Versioning Approach

- Internal builds: v0.x (e.g., v0.1 ingestion only, v0.4 with IAP generation).  
- Client-visible releases: v1.x (v1.0 = full Phase 1 ready for UAT, v1.1 = post-UAT fixes).

## Approval Flow

1. Internal Dev Review – Tech leads confirm functionality matches design.  
2. Internal QA – Automated tests + manual scenario testing.  
3. Client Review – Walkthrough in weekly sprint review meeting.  
4. Formal Sign-Off – Written approval in Confluence/Jira for production deployment.