

manureshed Cheat Sheet

MANURESHEDED QUICK REFERENCE

INSTALLATION

```
install.packages("manureshed")  
library(manureshed)
```

BASIC ANALYSIS

```
# Simple analysis  
results <- run_built_in_analysis(  
  scale = "county",      # or "huc8", "huc2"  
  year = 2016,           # 1987-2016  
  nutrients = "nitrogen",  
  include_wwtp = TRUE  
)
```

DATA LOADING

```
# Load data manually  
nugis <- load_built_in_nugis("county", 2016)  
wwtp <- load_built_in_wwtp("nitrogen", 2016)  
boundaries <- load_built_in_boundaries("county")
```

VISUALIZATION

```
# Create maps  
map <- create_classification_map(results, "nitrogen")  
  
# View interactive dashboard  
launch_dashboard()
```

COMPARISON

```
# Compare scenarios  
base <- run_built_in_analysis(..., include_wwtp = FALSE)  
wwtp <- run_built_in_analysis(..., include_wwtp = TRUE)  
compare_scenarios(list("Base" = base, "WWTP" = wwtp))
```

EXPORT

```
# Export results  
export_gis(results, "output_dir")  
save_spatial_data(results, "results.rds")
```

BATCH ANALYSIS

```
# Multiple years  
batch_results <- batch_analysis_years(  
  # ...  
)
```

```
years = 2010:2016,
scale = "huc8"
)
```

COMMON PATTERNS

County Analysis

```
results <- run_builtin_analysis(
  scale = "county", year = 2016, nutrients = "nitrogen"
)
```

State Analysis

```
ohio <- run_state_analysis(
  state = "OH", scale = "county", year = 2016
)
```

With Custom WWTP

```
results <- run_builtin_analysis(
  ...,
  custom_wwtp_nitrogen = "my_wwtp.csv"
)
```

TROUBLESHOOTING

Slow downloads? Enable caching:

```
# Caching enabled by default
data <- load_builtin_nugis("county", 2016)
```

Check data availability:

```
list_available_years()
check_builtin_data()
```

Get help:

```
?run_builtin_analysis
vignette("getting-started")
```

RESOURCES

- Documentation: <https://exelegch.github.io/manureshed-docs/>
- CRAN: <https://CRAN.R-project.org/package=manureshed>

Version 0.1.2 / More at: <https://github.com/cwru-sdle/manureshed>