Completed Projects: Before and After photos

BEFORE: Water lays on road edge

AFTER: reshape ditch to keep water off road and carry it to a crosspipe
Completed Projects: Before and After photos

BEFORE: Water flows across the road

AFTER: new cross pipe
Completed Projects: Before and After photos

BEFORE: Water flows down road surface

AFTER: Build up road base, reshape road crown, top with DSA
Completed Projects: Before and After photos

BEFORE: clay in road base led to uneven road surface; water washed out ditches

AFTER: add cross pipes, mill road surface, place woven geotextile fabric over clay, place stone road base, top with DSA
Completed Projects: Before and After photos

BEFORE: water washes away gravel and washes out ditches

AFTER: reshape and rock-line ditch
Completed Projects: Before and After photos

BEFORE: water washes out ditches

AFTER: install storm sewer system and rock-line ditches
Completed Projects: Before and After photos

**Before**
- multiple springs
- water flow

**After**
- Install French mattress, new cross pipe, build up road base and place DSA
Completed Projects: Before and After photos

**BEFORE**
Springs in middle of road, water runs down road surface

**AFTER**
New pipe & French Mattress, build up road base and top with DSA
Building a French Mattress

1. Excavate
2. Place non-woven geotextile fabric
3. Fill with AASHTO #1 or other clean stone. Then, place another layer of non-woven geotextile fabric (not pictured).
4. Once mattress is complete, top with 12” of stone. Shale is pictured here.
5. Crown road base with 2A gravel
Building a French Mattress

6. Finish with DSA
Completed Projects: Before and After photos

BEFORE: spring water and storm water wash out ditch

AFTER: pipe all water under stable, grassed road edge
Completed Projects: Before and After photos

BEFORE: water lays on road

AFTER: build up road base, crown road base, top with DSA
Completed Projects: Before and After photos

BEFORE: undersized stream pipe clogs regularly

AFTER: install wider stream crossing so debris can move through
BEFORE: water shoots out of undersized stream pipe, washing away road banks

AFTER: install wider stream crossing so water moves through at regular speed; stabilize banks with rock and grass
BEFORE: undersized driveway pipe, ditch washes out

AFTER: larger driveway pipe and reshape ditch (bedrock or grass stabilizes ditch)
Completed Projects: Before and After photos

BEFORE: water runs down road surface and washes away gravel

AFTER: build up road base, crown road, place DSA
Completed Projects: Before and After photos

BEFORE: water washes out ditches and ponds at the bottom of the hill; poor road base makes surface uneven

AFTER: build up road base 2 ft, crown road, install new pipes, stabilize ditches, place DSA
Completed Projects: Before and After photos

BEFORE: water ponds at the bottom of the hill and floods road during storms

AFTER: install a new cross pipe to outlet water
Completed Projects: Before and After photos

BEFORE: water saturates driveway/road edge

AFTER: install a new inlet and pipe to outlet water; create a ditch so water runs to pipe
Completed Projects: Before and After photos

BEFORE: spring water from yard saturates road edge; old inlet box on verge of collapse

AFTER: install a new inlet box and create swale so water flows to box instead of road
Completed Projects: Before and After photos

BEFORE: water lays on road edge
AFTER: grade road edge so water can flow off