Simple leaves - one by themself
Compound leaves - cluster of leaves

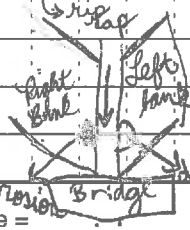
4/10/15 Geomorph Trip 1
~62°F 9:15 AM JMU Campus
Overcast/Patchy sun/Windy
Purpose: Site assessment (Phase I) of Siebert Run; Looking for evidence of instability
- Changes in landuse
- Evidence of stability/instability
- Bed material

Bed Material: Concrete

Stream shape: straight; narrow ~1.25'; straightened by humans

Erosion: The "channel" has been cut up higher from higher floods, two small (on either bank) patches of rock w/ wire trying to control the erosion (~10' x 4')

Other:



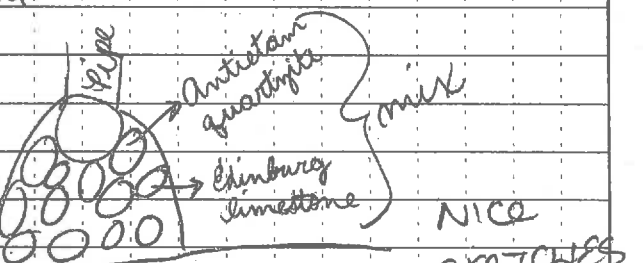
Scale: 1 square =

$Q = va$

Ramifications: - Velocity increases; steepened gradient → trying to scour; wants to downcut but put concrete down
- Concrete needed to be patched up w/ concrete mixed w/ rip rap

Drain (see pic) concentrating the energy from the runoff water onto one site on the right bank → leading to extra erosion of that spot

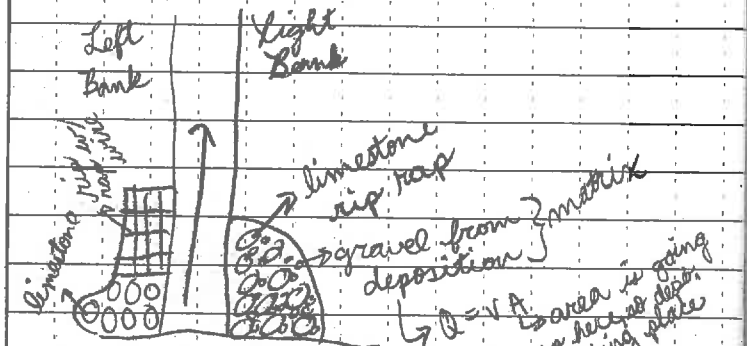
MOVED UPSTREAM
9:38 AM



Scale: 1 square = _____

UPSTREAM TO 2nd BRIDGE

9:41 AM; Sun coming out more, looking downstream



- Rip rap → causes hungry water + scours further down the stream
- 2 generations of R.R. here: the larger boulders by the bridge + the finer, wire covered stuff

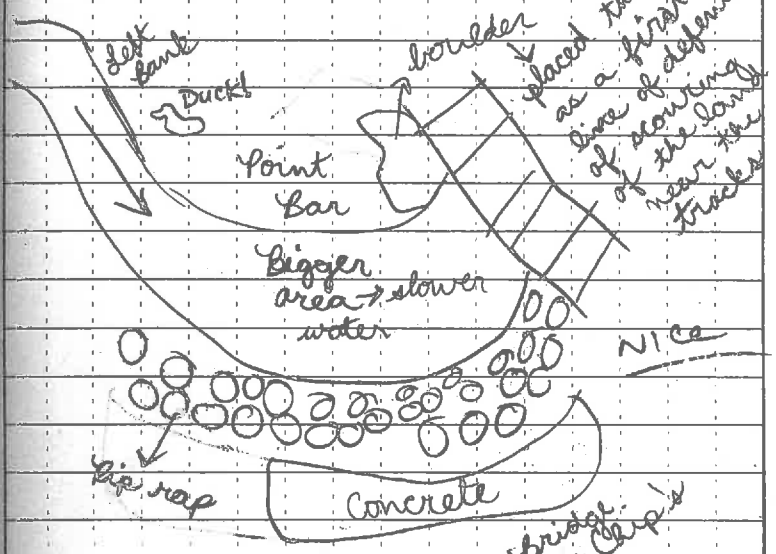
Looking upstream:

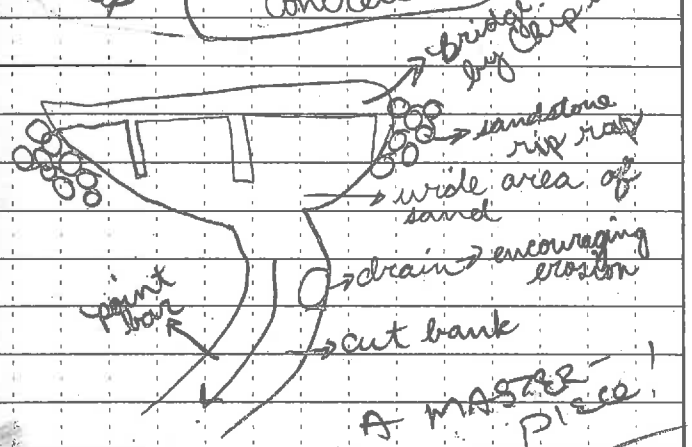
- Large boulder plucked up + fell in stream
- Evidence of erosion: manhole cylinder exposed; hole under sidewalk

Scale: 1 square = _____

MOVED TO RAIL ROAD

- Natural meanders back





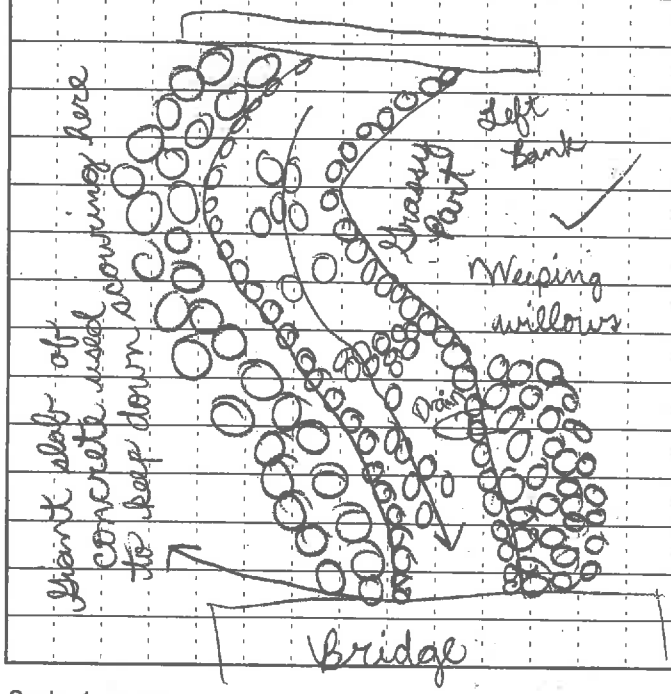
- Sediment finer

Scale: 1 square = _____

MOVED TO BIT CHIP'S BRIDGE + RSR TRACK ✓

↓

MOVED TO OTHER SIDE OF CHIP'S BRIDGE



Scale: 1 square = _____

- Lots of rip rap
  - Some plucked loose + fell in stream channel
- Kickpoints present ✓
- Several pipelines
  ↳ more erosion near these
- Floodplain moved down from Chip's to where some of the rip rap is
- Willows, sycamores present
  ↳ these need lots of water

MOVED TOWARD SMALL BRIDGE BEHIND CHIP'S ✓

- Roots (from willow) acting as riffles
- Rapids here

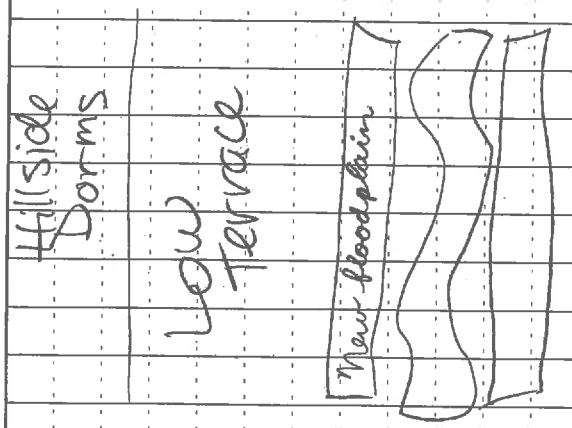
AT BRIDGE 10:25

- Manhole tilting

I LIKE THE WAY YOU DETAILED YOUR "MOVEMENT"

Scale: 1 square = _____

AFTER BRIDGE 10:27



BEHIND TENNIS COURT 10:30 AM

- Giant concrete wall
- Very stagnant
- Rock ledge coming out from right bank
  - ↳ Called J-Hooks; wanted to increase sediment movement
- Bad for fish
- Low oxygen, nasty water from runoff

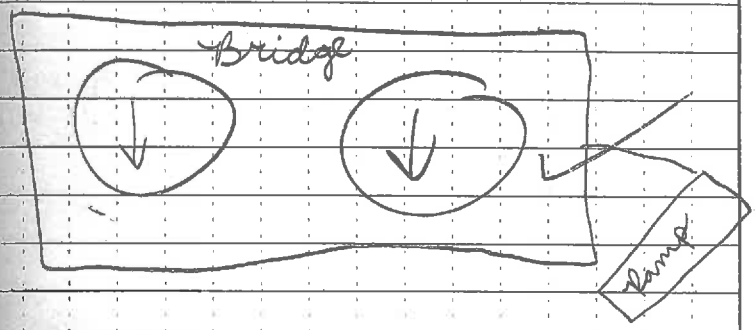
Scale: 1 square =

- Flashy discharge increases w/ the change in land use (paving + less infiltration)

UP TOWARDS END OF TENNIS COURT

- Where the concrete ends, major erosion begins

BY PARKING LOT



- Water being forced through smaller holes → deeper b/c scouring from hungry water
- Stream cutting down so much they've had to extend the runoff surface → concrete slab being scoured underneath

Scale: 1 square =

BEHIND PARKING LOT BRIDGE

- Large willow → roots creating knickpoints
- More J-Hooks
- Cotton woods
- Boulders over by MLK to help keep it from falling in

Assessment:
- Very unstable stream
- Load this place w/ willows + vegetation to act as anchor points for the slopes + add friction to help stabalize the stream
  - Be careful → too many trees will suck up all the water + you'll be left streamless

END

EXCELLENT

10:53 AM
~67°F
Cloudy / Patchy sun

Scale: 1 square = _____

4/17/15

Purcell Park

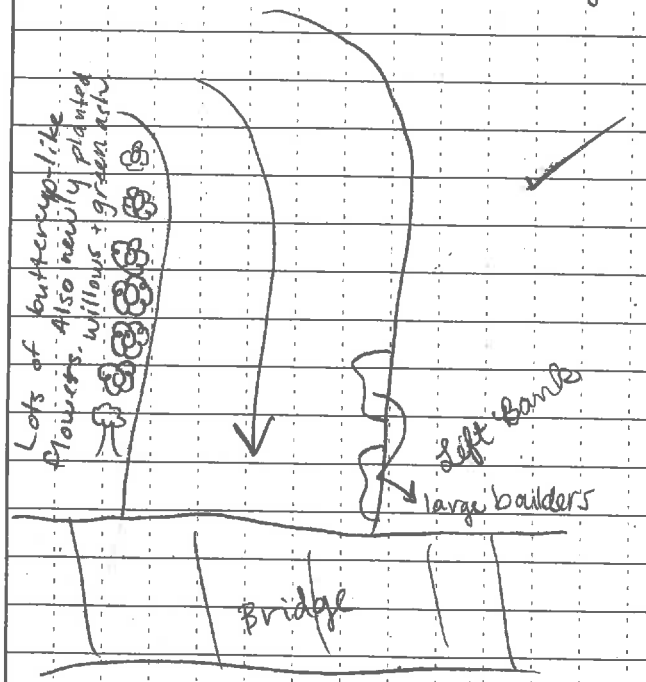
9:32 AM ~70°F Sunny/Slight breeze
Geomorph SP15' Class
Purpose: Look for signs of restoration of Black's Run. Compare to Siebert Run.

Riparian Buffer: plants all along the stream to help keep things in place + clean up the water to make it ok for fish + other critters.

Stopped upstream just across from the baseball field. On the original terrace
- Cement slabs on left bank, water is more oxygenated, moving pretty fast, relatively straight channel, murky brown/gray fine seds = sewage/contamination → lots of pollution
- Black's Run = one of the most polluted streams in Harrisonburg
- Old broken concrete/rip rap = to keep erosion down

Scale: 1 square = _____

Moved downstream to bridge.



- Large maple on right bank + lots of small ash saplings jammed into stream bank as rapirian buffers

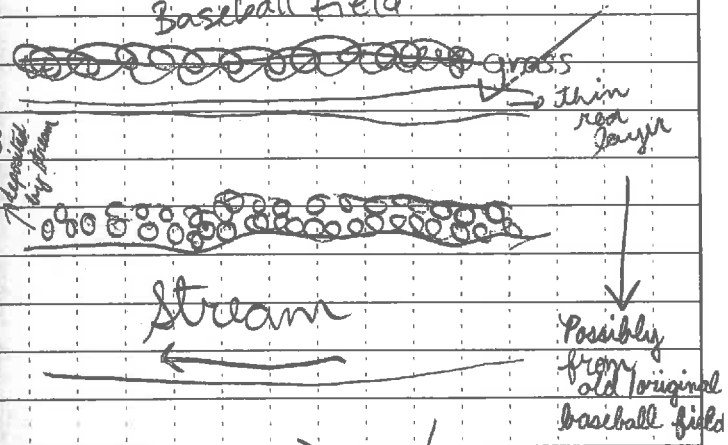
- One sign of a healthy stream bed is too much fine sediment → they lay their eggs in gravel mounds → too much fine sediment = suffocation of the fish

- Downstream even more are v-shaped structures / weirs used to help create riffles; there's one by the rock w/ a shoe + one just a little more downstream

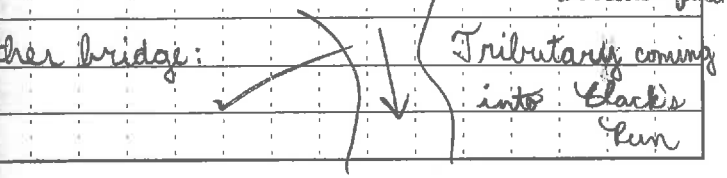
- Other plants nearby: dogwoods, honey locusts (large thorns, nitrogen fixers)

Downstream More

- By baseball field



- Other bridge:

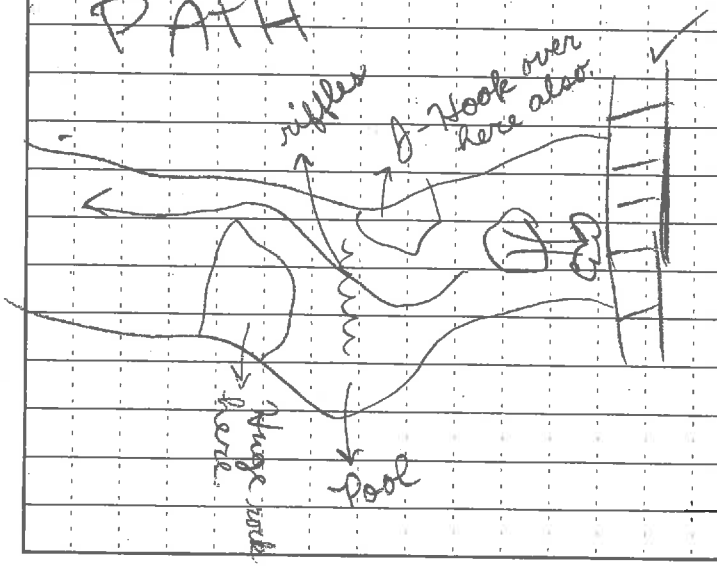


Scale: 1 square = _____

Scale: 1 square = _____

- Series of more modern channel points (100 years old or less); possibly from sea level decrease causing stream to incise
  - "Check dams" to help deepen water for wildlife ✓
- Red buds → bloom first, pink/purple flowers

BY THE BRIDGE NEAR THE NEW PATH

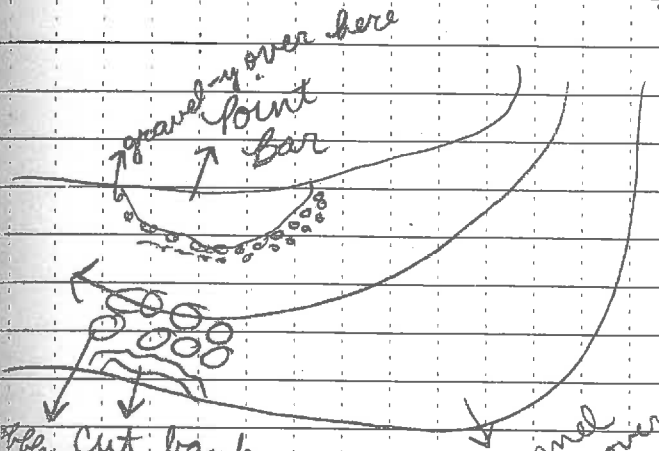


Scale: 1 square = _____

- Is the large slab bed rock or was it placed there?
  - Not 100% sure, but (probably bedrock (too large to have been moved there)
  - It's controlling the incision of the stream

DOWNSTREAM ✓

NOPE (Near the road)



- Why no pool on the cut bank? The root systems + cobbles transferring the scours

Scale: 1 square =

- Black's Run used to be wider like at this stop → they narrowed the channel to help water moving + get the fine stuff out.

- The stress from the narrower parts coming down here + making a wider, deeper channel

END

10:40 AM ~75°F Slight Breeze

EXCELLENT WORK!

Scale: 1 square = _____

Scale: 1 square =