

floodgates

for piano solo
with four optional retunings



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Floodgates

Bay 1: Ruin of Time.....	1
Bay 2: Floodwaters.....	7
Bay 3: Barge Interlude.....	10
Bay 4: of Dark Light.....	14
Tunings.....	24
Performance notes.....	27

on Norco and the Bonnet Carré Spillway:

17 of 20 ft.

Lapping at the gates.

This age of industry yields
to new earth,
and the return;
while water rises and land recedes.

The city burns and cracks
what's underneath;
sinking into
the man-made ruin of dark light.

Premiered by J.T. Hassell March 2020

1 cm ≈ 60 bpm

Bay 1: Ruin of Time for Chris Trapani

1

Slowly Unwinding

← 13 →

mp (1) 2 pp (1) 2

← 21 →

pp (1) 2 mp (1) 2

← 8 → ← 8 →

pp (1) 2 mp (1) 2

Handwritten musical score for piano, consisting of three systems of staves. The notation includes various musical symbols, dynamics, and performance instructions.

System 1:

- Measures 1-13 and 15-17 are indicated by a bracket at the top.
- Measures 13 and 15 are marked with 'X'.
- Measure 13: *pp* (pianissimo), *mp* (mezzo-piano), *8-1 (loco)*, *subito p* (suddenly piano).
- Measure 15: *ppp* (pianississimo), *p* (piano), *15* (fingering), ** roll downward*.

System 2:

- Measures 1-5 and 8-10 are indicated by a bracket at the top.
- Measures 5 and 8 are marked with 'X'.
- Measure 5: *pp*, *mp*, *p*, *3* (fingering).
- Measure 8: *mp*, *8-1*, *(loco)*, *p*, *f* (forte).
- Measure 10: *mp*, *pp*, *8-1*, *(loco)*.
- Tempo marking: *Rubato*.

System 3:

- Measures 1-3 and 5-13 are indicated by a bracket at the top.
- Measures 3 and 5 are marked with 'X'.
- Measure 1: *p*, *mp*, *3* (fingering), *(5)* (fingering).
- Measure 3: *mp*, *p*, *8-1*, *(loco)*, *pp*.
- Measure 5: *pp*, *mp*, *p*, *8-1*, *(loco)*.
- Measure 13: *mp*, *p*, *8-1*, *(loco)*.

Handwritten musical score for the first system. The piano staff (top) begins with a wavy line and a *f* dynamic marking. It contains several measures with notes, some marked with *(b)* and *(8)*. The bass staff (bottom) starts with a *f* dynamic and includes notes with *(13)*, *(1060)*, and *(b)* markings. Above the piano staff, there are handwritten notes: *21*, *(1060)*, *15*, and *1 (1060)*. Below the bass staff, there are notes: *3-1*, *(1060)*, *(#) (21)*, and *(5)*. A bracket with the number *3* spans three measures in the bass staff.

Handwritten musical score for the second system. The piano staff (top) has a wavy line and a *f* dynamic. It includes notes with *(13)* and *(1060)* markings. The bass staff (bottom) has notes with *(13)* and *(1060)* markings. Above the piano staff, there are handwritten notes: *15*, *1*, *3*, *15-1*, and *1 (1060)*. Below the bass staff, there are notes: *3-1*, *(1060)*, *(#) (21)*, and *(5)*. A bracket with the number *3* spans three measures in the bass staff.

Handwritten musical score for the third system. The piano staff (top) has a wavy line and a *f* dynamic. It includes notes with *(13)* and *(1060)* markings. The bass staff (bottom) has notes with *(13)* and *(1060)* markings. Above the piano staff, there are handwritten notes: *15*, *1*, *3*, *15-1*, and *1 (1060)*. Below the bass staff, there are notes: *3-1*, *(1060)*, *(#) (21)*, and *(5)*. A bracket with the number *3* spans three measures in the bass staff.

fragmented,
like wreckage,
receding

$11 \text{ cm} \approx 60 \text{ bpm}$

fff!

subito pp < mp > p

mp

sfz shard-like

p

mp

mf

p

Handwritten musical score for piano, measures 8-15. The score is written on a grand staff (treble and bass clefs). Measure 8 starts with a key signature change to one sharp (F#) and a dynamic marking of *ppp*. A slur covers measures 8-15, with a *loco* marking above measure 9. A *Subito mp* marking is written below measure 10. Measure 15 ends with a sharp sign (#) and a slur. Above the staff, a bracket indicates measures 8-13, and another bracket indicates measures 15-5.

Handwritten musical score for piano, measures 13-21. The score is written on a grand staff. Measure 13 starts with a dynamic marking of *mp*. A slur covers measures 13-21, with a *pp* marking above measure 14. Above the staff, a bracket indicates measures 13-13, and another bracket indicates measures 15-21. Below the staff, a bracket indicates measures 13-13, and another bracket indicates measures 15-21.

Handwritten musical score for piano, measures 15-21. The score is written on a grand staff. Measure 15 starts with a *loco* marking above the staff. A slur covers measures 15-21, with a *ppp* marking below measure 16. Above the staff, a bracket indicates measures 15-15, and another bracket indicates measures 15-8. Below the staff, a bracket indicates measures 15-15, and another bracket indicates measures 15-8. A *fall.* marking is written above measure 18. Measure 21 ends with a double bar line.

8-1 New Orleans, LA.
PPPP 23 January 2019

Handwritten musical score for piano, first system. The notation includes a treble and bass staff with complex melodic lines and chords. Above the treble staff, there are handwritten annotations: "15 - - - - 1 (10 6 9)" and "5:4" under a slur. The piece includes various accidentals (sharps, flats, naturals) and dynamic markings like "mp" and "p". The system is divided into measures by bar lines.

Handwritten musical score for piano, second system. The notation continues the melodic and harmonic development. Annotations include "15 - - - - 1" above the treble staff and "SFZ" below the bass staff. The notation is dense with notes and accidentals.

Handwritten musical score for piano, third system. This system is more complex, featuring a "3/4" time signature change and a "rvbato" (ritardando) marking. Annotations include "15 - - - - 1 (10 6 9)", "15 - - - - 1", and "8 - - - 1 (10 6 9)". A "3" is written under a slur in the bass staff, and "rffz*" is written below the treble staff. The system ends with a double bar line.

*emphasize the whole group

Handwritten musical score for piano, featuring a 3:4 time signature and a 12:8 time signature. The score includes a treble and bass staff. The first system is marked with a 3:4 time signature and a 15-1 (1000) annotation. The second system is marked with a 12:8 time signature and a 15-1 (1000) annotation. The tempo is marked *piu rubato*. The dynamics are marked *ppp*.

//
a tempo

Handwritten musical score for piano, featuring a 15-1 (1000) annotation. The score includes a treble and bass staff. The tempo is marked *a tempo*. The dynamics are marked *ppp*. The score is divided into five measures, each with a 15-1 (1000) annotation. The first measure is marked with a 5/4 time signature. The second measure is marked with a 5/4 time signature. The third measure is marked with a 5/4 time signature. The fourth measure is marked with a 5/4 time signature. The fifth measure is marked with a 5/4 time signature.

Handwritten musical score for piano, featuring a 13/4 time signature. The score includes a treble and bass staff. The tempo is marked *a tempo*. The dynamics are marked *ppp*. The score is divided into two measures, each with a 13/4 time signature.

New Orleans, LA.
18 June 2019

Handwritten musical score for piano, featuring Right Hand (R.H.) and Left Hand (L.H.) staves.

Right Hand (R.H.):

- Staff 1 (Treble Clef): Contains melodic lines with various dynamics including *pp*, *sfz*, and *mp*. Includes a crescendo hairpin and a fermata.
- Staff 2 (Bass Clef): Accompanying bass line.
- Staff 3 (Bass Clef): Pedal point or bass line.

Left Hand (L.H.):

- Staff 4 (Bass Clef): Features complex chords and fingerings (2, 3, 7, 4, 5). Includes the instruction "Very expressive" and a wavy line indicating vibrato or expressive movement.
- Staff 5 (Bass Clef): Continuation of the L.H. part.
- Staff 6 (Bass Clef): Continuation of the L.H. part.

Performance Markings:

- Ped.**: Pedal markings spanning across the R.H. and L.H. staves.
- Hand Diagrams**: Illustrations of the left hand showing fingerings (2, 3, 7, 4, 5) and positions.
- Dynamic Markings**: *pp*, *sfz*, *mp*, *p*, *f*.
- Other Markings**: *sfz*, *pp*, *mp*, *p*, *f*, *sfz*, *pp*, *mp*.

[illegible]

The image displays a handwritten musical score and a corresponding fingering diagram. The score is written on three staves: a treble clef staff at the top, and two bass clef staves below it. The treble staff contains two measures, each with a single eighth note marked *sfz*. The bass staves contain four measures, each with a single eighth note. The notes in the bass staves are marked with dynamic markings: *mp*, *mf*, *f*, and *piu f* (with the note *very expressive* written next to it). Below the staves is a detailed fingering diagram. It shows a hand with fingers numbered 2, 3, 4, and 5. Lines connect the fingers to the notes in the bass staves, indicating the fingering for each note. The diagram is divided into four sections, each corresponding to one of the bass staves. The first section shows the hand with fingers 2, 3, 4, and 5. The second section shows the hand with fingers 2, 3, 4, and 5. The third section shows the hand with fingers 2, 3, 4, and 5. The fourth section shows the hand with fingers 2, 3, 4, and 5, with the note *very expressive* written next to it. Below the diagram is a dynamic marking section. It starts with *subito p*, followed by a wedge-shaped line leading to *fmp*, and another wedge-shaped line leading to *ff*.

Handwritten musical score and fingering diagram. The score is written on three staves (treble and two bass clefs). The treble staff contains two measures, each with a single eighth note marked *sfz*. The bass staves contain four measures, each with a single eighth note. The notes in the bass staves are marked with dynamic markings: *mp*, *mf*, *f*, and *piu f* (with the note *very expressive* written next to it). Below the staves is a detailed fingering diagram. It shows a hand with fingers numbered 2, 3, 4, and 5. Lines connect the fingers to the notes in the bass staves, indicating the fingering for each note. The diagram is divided into four sections, each corresponding to one of the bass staves. The first section shows the hand with fingers 2, 3, 4, and 5. The second section shows the hand with fingers 2, 3, 4, and 5. The third section shows the hand with fingers 2, 3, 4, and 5. The fourth section shows the hand with fingers 2, 3, 4, and 5, with the note *very expressive* written next to it. Below the diagram is a dynamic marking section. It starts with *subito p*, followed by a wedge-shaped line leading to *fmp*, and another wedge-shaped line leading to *ff*.

1 cm=60bpm

veiled & mysterious,
like a refinery
on a sickly riverbank,
Natchez, Louisiana

Bay 4: of Dark Light for Luca Hoffmann

14

8--1 12 6 Slow

mp

8--1 (senza Ped.) $\hat{S}P$ *

* depress sostenuto until $\hat{S}P$ is reached

8--1 (loco) $\hat{S}P$

2/4 mp con Ped.

5

SFZ

mp con Poco Ped.

$\hat{S}P$

8--1 mp senza Ped.

TO:F**

Rapid & forceful

6

8--1 (loco)

SFZ

SFZ

Ped.

Subito senza Ped. $\hat{S}P$

4

12

(loco)

8--1

mp

8--1 molto Ped.

8--1 senza Ped.

$\hat{S}P$

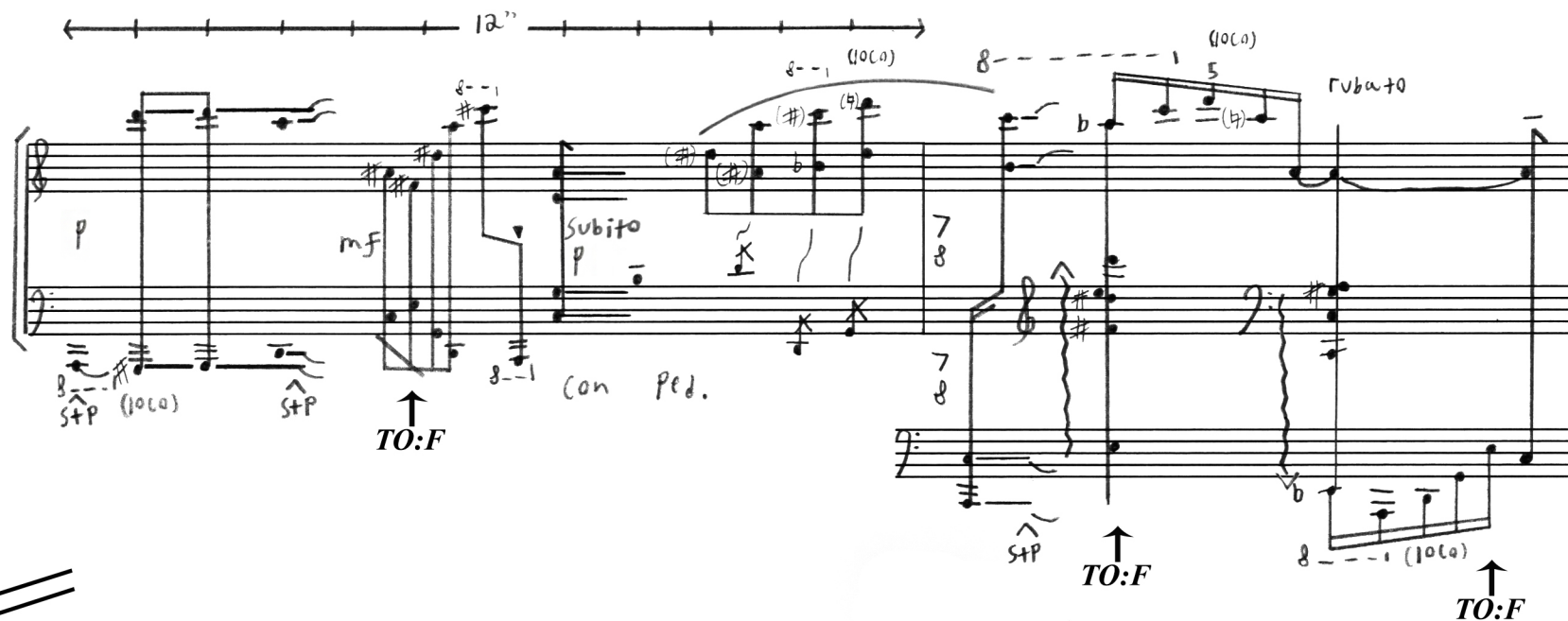
P

** Anytime this symbol is attached to an "e", it should be played as the nearest "f" if the piano has been retuned. Only mind this symbol if retuned (tuning ossia: f)

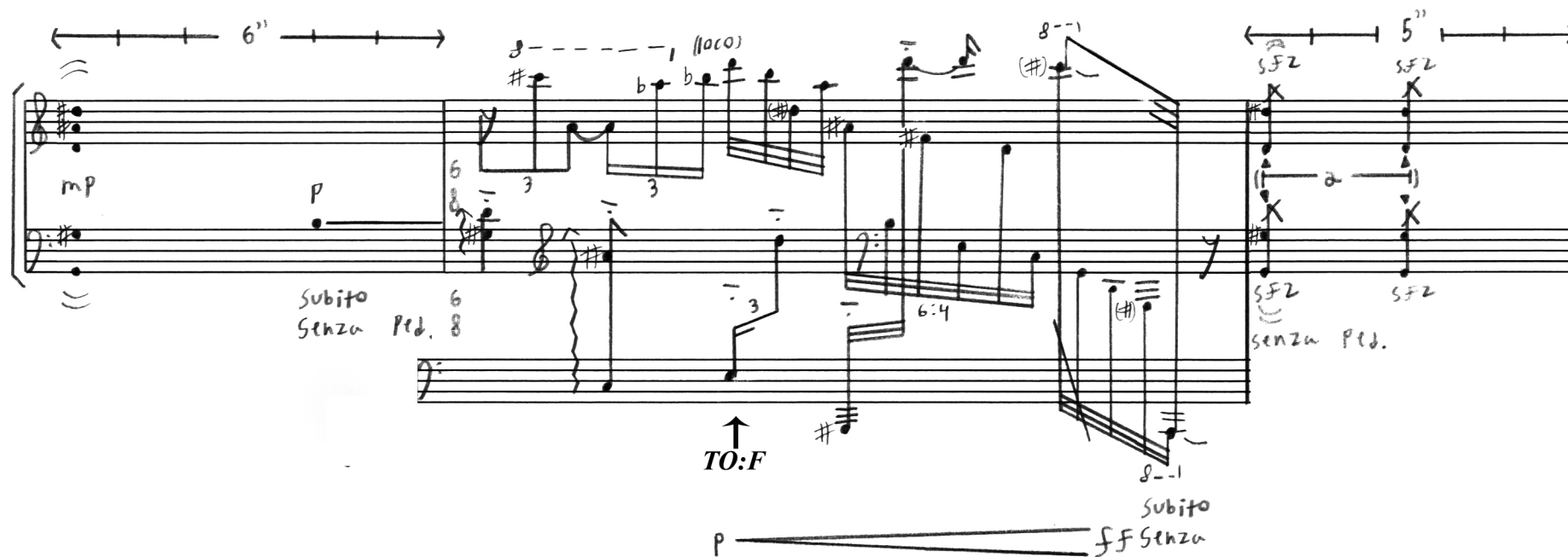
* If one's hands are not large enough for this interval, catch only the augmented octaves in the STP

[illegible]

Handwritten musical score for piano, featuring a 12-measure section. The score includes dynamic markings (*p*, *mf*, *p*), articulation (*Subito*), and performance instructions (*con Ped.*, *rubato*). The notation includes various accidentals, slurs, and fingerings. The key signature is one sharp (F#). The score is marked with **TO:F** at several points.



Handwritten musical score for piano, featuring a 6-measure section followed by a 5-measure section. The score includes dynamic markings (*mp*, *p*, *SFZ*), articulation (*Subito*), and performance instructions (*Senza Ped.*, *Subito*). The notation includes various accidentals, slurs, and fingerings. The key signature is one sharp (F#). The score is marked with **TO:F** at several points.



(non rubato)

Handwritten musical score for piano, marked *(non rubato)*. The tempo is indicated as $\text{♩} = 60$. The score includes a treble and bass staff. The treble staff features a melodic line with a slur and a fermata, marked *mf*. The bass staff has a bass line with a slur and a fermata, marked *sfz*. A dynamic marking *Subito p* is present. A section marked *(2)* with a tempo of $\text{♩} = 24$ is indicated below the bass staff, with the instruction *Senza ped.* and *con ped.* written nearby.

Handwritten musical score for piano, marked *molto rubato*. The score includes a treble and bass staff. The treble staff features a melodic line with a slur and a fermata, marked *mp*. The bass staff has a bass line with a slur and a fermata, marked *con ped.*. A dynamic marking *TO:F* is present. The score includes various dynamic markings and articulations, including *mp*, *sfz*, and *Subito p*.

Handwritten musical score for piano, marked *molto rubato*. The score includes a treble and bass staff. The treble staff features a melodic line with a slur and a fermata, marked *mp*. The bass staff has a bass line with a slur and a fermata, marked *con ped.*. A dynamic marking *TO:F* is present. The score includes various dynamic markings and articulations, including *mp*, *sfz*, and *Subito p*.

Handwritten musical score for the first system. The score is written on piano and organ staves. The piano part includes notes, rests, and dynamic markings such as *f*, *mp*, *PPP*, and *p*. The organ part includes notes, rests, and dynamic markings such as *f*, *mp*, *PPP*, and *p*. The score is marked with a 2/4 time signature and includes various musical notations such as notes, rests, and dynamic markings. A tempo marking of 2cm ≈ 60 bpm is present.

* add an additional f3 to the given chord

2cm ≈ 60 bpm

Handwritten musical score for the second system. The score continues the piece with piano and organ staves. The piano part includes notes, rests, and dynamic markings such as *f*, *mp*, *PPP*, and *p*. The organ part includes notes, rests, and dynamic markings such as *f*, *mp*, *PPP*, and *p*. The score is marked with a 2/4 time signature and includes various musical notations such as notes, rests, and dynamic markings. A tempo marking of 2cm ≈ 60 bpm is present.

Handwritten musical score for three systems of piano and bass staves. The notation includes various musical symbols such as notes, rests, accidentals, and dynamic markings.

System 1:

- Piano Staff:** Features a melodic line with notes and accidentals, including a trill marked with a dashed line and '8'. A slur covers the first two measures.
- Bass Staff:** Contains a series of chords and single notes. A slur covers the first two measures.
- Annotations:** *mf* (mezzo-forte) is written above the piano staff. *fff* (fortissimo) is written above the bass staff. The instruction *poco a poco cresc. →* is written between the staves.

System 2:

- Piano Staff:** Continues the melodic line with notes and accidentals. A slur covers the first two measures.
- Bass Staff:** Continues the harmonic support with chords and single notes. A slur covers the first two measures.
- Annotations:** *TO:F* (Tutti) is written above the piano staff.

System 3:

- Piano Staff:** Continues the melodic line with notes and accidentals. A slur covers the first two measures.
- Bass Staff:** Continues the harmonic support with chords and single notes. A slur covers the first two measures.

The score is written in a fluid, handwritten style, typical of a composer's draft. The notation includes various musical symbols such as notes, rests, accidentals, and dynamic markings. The systems are connected by a large, sweeping slur that spans across the piano and bass staves of all three systems.

Handwritten musical score for measures 15-17. The score is written on a grand staff (treble and bass clefs). Measure 15 (labeled 17/16) features a treble staff with a melodic line starting on B4, moving up to D5, and a bass staff with a supporting line. A piano (p) dynamic marking is present. Measure 16 (labeled 16/17) continues the melodic line in the treble and has a ppp dynamic marking. Measure 17 shows a melodic line in the treble and a bass line. A double bar line is followed by a key signature change to F major, indicated by an upward arrow and the text "TO:F".

//

Handwritten musical score for measures 18-19. The score is written on a grand staff. Measure 18 (labeled 19/16) features a treble staff with a melodic line starting on B4, moving up to D5, and a bass staff with a supporting line. A piano (p) dynamic marking is present. Measure 19 (labeled 14/16) continues the melodic line in the treble and has a ppp dynamic marking. The score ends with a double bar line and a key signature change to F major, indicated by an upward arrow and the text "TO:F".

1cm = 1"

Handwritten musical score for a piece, likely for piano. The score is written on multiple staves, including a grand staff (treble and bass clefs) and a separate staff at the bottom. The notation includes various musical symbols, accidentals, and dynamic markings.

Key markings and instructions include:

- Top staff:** *mp decresc.*, *loco*, *p*, *ppp*, *sfz*, *TO:F*, *gradually change Ped. holding "4 b"*.
- Middle staves:** *15 (2)*, *16 (2)*, *p*, *ppp*, *sfz*, *TO:F*.
- Bottom staff:** *mp decresc.*, *TO:F*.

The score is marked with a scale of 1cm = 1".

Bay 1: Ruin of Time tuning sheet

24

Handwritten musical staff with notes and tuning data. The staff is in treble and bass clef. Notes are placed on the lines and spaces. Tuning data is written below the staff.

Frequency (Hz)	Interval
44.50H	$\flat + 33.23\ell$
72.00H	$\flat - 33.91\ell$
188.49H	$\sharp + 32.34\ell$
304.98H	$\flat - 34.57\ell$
798.45H	$\sharp - 68.37\ell$
1291.91H	$\flat - 35.28\ell$
3382.28H	$\sharp + 30.90\ell$

Handwritten musical staff with notes and tuning data. The staff is in treble and bass clef. Notes are placed on the lines and spaces. Tuning data is written below the staff. Beating rhythms are indicated by vertical lines and text.

Frequency (Hz)	Interval	Beating Rhythm
55.00H	$\flat + 33.23\ell$	1 bps 60 bpm
54.00H	$\flat - 33.91\ell$	2 bps 120 bpm
110H	$\flat - 33.91\ell$	3 bps 180 bpm
108H	$\flat - 33.91\ell$	5 bps 300 bpm
220H	$\flat - 33.91\ell$	8 bps 480 bpm
217H	$\flat - 33.91\ell$	13 bps 780 bpm
220H	$\flat - 33.91\ell$	21 bps 1260 bpm
440H	$\flat - 33.91\ell$	
435H	$\flat - 33.91\ell$	
440H	$\flat - 33.91\ell$	
880H	$\flat - 33.91\ell$	
872H	$\flat - 33.91\ell$	
880H	$\flat - 33.91\ell$	
1760H	$\flat - 33.91\ell$	
1747H	$\flat - 33.91\ell$	
1760H	$\flat - 33.91\ell$	
3520H	$\flat - 33.91\ell$	
3499H	$\flat - 33.91\ell$	
3520H	$\flat - 33.91\ell$	

Note: These are inflectional tunings of A. One of the strings returned to produce beating. Beating rhythms are included in beats per second and beats per minute.

Handwritten musical staff with notes and tuning data. The staff is in treble and bass clef. Notes are placed on the lines and spaces. Tuning data is written below the staff.

Frequency (Hz)	Interval
41.25H	$\flat + 2\ell$
68.66H	$\sharp - 16\ell$
165.00H	$\flat + 2\ell$
586.65H	$\flat - 2\ell$
1409.88H	$\flat + 16\ell$
2346.61H	$\flat - 2\ell$

Handwritten musical staff with notes and tuning data. The staff is in treble and bass clef. Notes are placed on the lines and spaces. Tuning data is written below the staff.

Frequency (Hz)	Interval
48.13H	$\flat - 31\ell$
96.26H	$\flat - 31\ell$
192.52H	$\flat - 31\ell$
385.04H	$\flat - 31\ell$
770.08H	$\flat - 31\ell$
1540.15H	$\flat - 31\ell$
3080.31H	$\flat - 31\ell$

Bay 2: Floodwater tuning sheet

25

Handwritten notes above staff: \sharp , \sharp , 15 - - - - , \sharp

	44.50H	72.00H		188.49H	304.98H		798.45H	1291.91H		3382.28H
	$\flat + 33.23 \ell$	$\flat - 33.91 \ell$		$\sharp + 32.34 \ell$	$\flat - 34.57 \ell$		$\sharp - 68.37 \ell$	$\flat - 35.28 \ell$		$\sharp + 30.90 \ell$

Handwritten notes below staff: $(\flat -)$, \sharp , \flat , $(\sharp \flat)$

Handwritten notes above staff: \flat , \sharp

27.5H	66.391H	160.28H	386.95H	934.18H	2255.3H
	$\flat + 25.77 \ell$	$\flat - 48.25 \ell$	$\flat - 22.45 \ell$	$\flat + 3.43 \ell$	$\sharp + 29.66 \ell$

Handwritten notes below staff: $(\flat -)$, \sharp

Handwritten notes above staff: \flat , 15 - - - - , \sharp

27.5H	90.826H	\sharp 299.98H	990.77H	3272.3H
	$\flat + 68.33 \ell$	$\flat + 36.86 \ell$	$\flat + 5.25 \ell$	$\flat + 73.68 \ell$

Handwritten notes below staff: \sharp , \flat

Bay 3: Barge Interlude

26

S1 S2 S1 S2 S1 S2 S3 S1 S2 S3 S1 S2 S3 S1 S2 S3

55.00H 54.00H 110H 108H 220H 217H 220H 440H 435H 440H 880H 872H 880H 1760H 1747H 1760H 3520H 3499H 3520H

1 bps 60 bpm 2 bps 120 bpm 3 bps 180 bpm 5 bps 300 bpm 8 bps 480 bpm 13 bps 780 bpm 21 bps 1260 bpm

Note: These are inflectional tunings of A. One of the strings returned to produce beating. Beating rhythms are included in beats per second and beats per minute.

476.98H 637.27H

#139.72 #141.29

586.65H 1409.88H 2346.61H

4-2 4+16 4-2

Bay 4: of Dark Light tuning sheet

27

Handwritten notes above the staff: \hat{b}_2 and $\sharp - - -$

27.5H	66.391H	160.28H	386.95H	934.18H	2255.3H
	$\flat + 25.77$	$\flat - 48.25$	$\flat - 22.45$	$\flat + 3.43$	$\sharp + 29.66$

Handwritten notes below the staff: $(\flat - - -)$ and $\sharp -$

	38.216H	52.740H	72.146H	97.557H	129.86H	168.94H	211.99H	249.04H	292.56H
	$\flat - 28.02$	$\sharp + 27.48$	$\flat - 30.32$	$\flat - 7.84$	$\flat - 12.67$	$\sharp - 57.13$	$\sharp + 35.84$	$\flat + 14.66$	$\flat - 6.49$

Handwritten notes below the staff: $(\flat - -)$, $\flat -$, $\sharp -$, $\flat -$, $\flat -$, $\flat -$, $\sharp -$, $\sharp -$, $\flat -$, and $\sharp - - -$

367.11H	477.61H	635.74H	859.67H	1175.0H	1622.9H
$\sharp - 13.51$	$\sharp + 42.02$	$\sharp + 37.13$	$\flat - 40.47$	$\flat + 1.92$	$\flat - 40.41$

Handwritten notes above the staff: $\sharp -$, $\sharp -$, $\sharp -$, $\flat -$, $\flat -$, and $\flat -$

Handwritten notes below the staff: $\sharp - - -$

Performance Notes:

Then entire work may be performed as one movement. If the entire work is played, **do not change ped. between movements!**

Each of these works has a proposed tuning that may be employed when convenient. If these pieces are to be recorded, I strongly urge the performer to use the retunings. Using a discerning ear, and a computer assisted tuning application, it is not very difficult to get the desired tunings. All tunings are derived from the harmonic series, or pitch ratios based on the metallic ratios. I encourage the pianist to perform the tuning- it's fun! Please note that the cents deviation is based on the assumed hertzs of 12- TET. See the last page for a chart made by the super awesometastic Joshua Fineberg.

All of these works draw their inspiration from sections of the coast and the industry present there. Special thanks to Luca Hoffmann for going out to the spillway and Norco to take photos together all those times! Breathtaking works you got.

