ASRS Database Report Set

Controlled Flight Toward Terrain

Report Set Description.................................A sampling of reports referencing inadvertent controlled flight towards terrain.

Update Number........................................33.0

Date of Update..............................................May 31, 2018

Number of Records in Report Set....................50

Number of New Records in Report Set ............50

Type of Records in Report Set........................For each update, new records received at ASRS will displace a like number of the oldest records in the Report Set, with the objective of providing the fifty most recent relevant ASRS Database records. Records within this Report Set have been screened to assure their relevance to the topic.
MEMORANDUM FOR: Recipients of Aviation Safety Reporting System Data

SUBJECT: Data Derived from ASRS Reports

The attached material is furnished pursuant to a request for data from the NASA Aviation Safety Reporting System (ASRS). Recipients of this material are reminded when evaluating these data of the following points.

ASRS reports are submitted voluntarily. The existence in the ASRS database of reports concerning a specific topic cannot, therefore, be used to infer the prevalence of that problem within the National Airspace System.

Information contained in reports submitted to ASRS may be amplified by further contact with the individual who submitted them, but the information provided by the reporter is not investigated further. Such information represents the perspective of the specific individual who is describing their experience and perception of a safety related event.

After preliminary processing, all ASRS reports are de-identified and the identity of the individual who submitted the report is permanently eliminated. All ASRS report processing systems are designed to protect identifying information submitted by reporters; including names, company affiliations, and specific times of incident occurrence. After a report has been de-identified, any verification of information submitted to ASRS would be limited.

The National Aeronautics and Space Administration and its ASRS current contractor, Booz Allen Hamilton, specifically disclaim any responsibility for any interpretation which may be made by others of any material or data furnished by NASA in response to queries of the ASRS database and related materials.

Linda J. Connell, Director
NASA Aviation Safety Reporting System
CAVEAT REGARDING USE OF ASRS DATA

Certain caveats apply to the use of ASRS data. All ASRS reports are voluntarily submitted, and thus cannot be considered a measured random sample of the full population of like events. For example, we receive several thousand altitude deviation reports each year. This number may comprise over half of all the altitude deviations that occur, or it may be just a small fraction of total occurrences.

Moreover, not all pilots, controllers, mechanics, flight attendants, dispatchers or other participants in the aviation system are equally aware of the ASRS or may be equally willing to report. Thus, the data can reflect reporting biases. These biases, which are not fully known or measurable, may influence ASRS information. A safety problem such as near midair collisions (NMACs) may appear to be more highly concentrated in area “A” than area “B” simply because the airmen who operate in area “A” are more aware of the ASRS program and more inclined to report should an NMAC occur. Any type of subjective, voluntary reporting will have these limitations related to quantitative statistical analysis.

One thing that can be known from ASRS data is that the number of reports received concerning specific event types represents the lower measure of the true number of such events that are occurring. For example, if ASRS receives 881 reports of track deviations in 2010 (this number is purely hypothetical), then it can be known with some certainty that at least 881 such events have occurred in 2010. With these statistical limitations in mind, we believe that the real power of ASRS data is the qualitative information contained in report narratives. The pilots, controllers, and others who report tell us about aviation safety incidents and situations in detail – explaining what happened, and more importantly, why it happened. Using report narratives effectively requires an extra measure of study, but the knowledge derived is well worth the added effort.
Report Synopses
<table>
<thead>
<tr>
<th>ACN: 1524016 (1 of 50)</th>
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</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Air carrier flight crew reported receiving a EGPWS &quot;Caution Obstacle&quot; on visual approach to SDF. The crew simultaneously visually acquired the tower that likely caused the warning and returned to on-course and landed uneventfully.</td>
</tr>
</tbody>
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<thead>
<tr>
<th>ACN: 1523317 (2 of 50)</th>
</tr>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Air carrier Captain reported the company's 10-4 chart for the RNAV visual to Runway 4 at MHLM is inaccurate and resulted in an unnecessary EGPWS alert.</td>
</tr>
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<table>
<thead>
<tr>
<th>ACN: 1523316 (3 of 50)</th>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>B757 Captain reported receiving a ground proximity alert while executing a 360-degree turn due to being too high on a GPS approach. Reporter recommended resetting the target descent altitude from MDA to FAF altitude when executing this maneuver.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>ACN: 1521567 (4 of 50)</th>
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<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Pilot reported receiving several GPWS alerts while crossing a ridge line during a visual approach to EAT.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACN: 1520833 (5 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Air carrier Captain reported continuing the visual approach to BTV Runway 33 after receiving a GPWS terrain warning because all terrain was in sight.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACN: 1515651 (6 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>Beech V35 pilot reported noticing unmarked and uncharted power lines have been installed near the final approach course for Runway 35 at CWC Airport.</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>ACN: 1515327 (7 of 50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synopsis</strong></td>
</tr>
<tr>
<td>A320 flight crew reported descending below the glideslope on a approach to CVG and receiving a low altitude alert from the tower.</td>
</tr>
</tbody>
</table>

<p>| ACN: 1515186 (8 of 50) |</p>
<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
<th>LCH TRACON Developmental Controller reported vectoring an aircraft below the MVA.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACN:</strong> 1514884  <strong>(9 of 50)</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
<th>CRJ-700 Captain reported an EGPWS warning on a night visual approach to SYR related to a tower that was closer than expected.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACN:</strong> 1514883  <strong>(10 of 50)</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
<th>Air carrier Check Airman reported receiving a GPWS terrain alert on approach to MFR in IFR conditions.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACN:</strong> 1514838  <strong>(11 of 50)</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
<th>BK-117 pilot reported that after the main rotor contacted tree branches during a landing attempt, the helicopter was repositioned to land in a nearby field.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACN:</strong> 1514808  <strong>(12 of 50)</strong></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
<th>Air carrier flight crew reported responding to a GPWS event during a visual approach to landing.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACN:</strong> 1514683  <strong>(13 of 50)</strong></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
<th>ASE TRACON Controller reported that during training a Developmental descended an aircraft below the MVA.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACN:</strong> 1514283  <strong>(14 of 50)</strong></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
<th>Flight crew reported receiving an EGPWS warning and executing the prescribed escape maneuver; afterwards, ATC advised the crew of the MVA and re-cleared them for the approach.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACN:</strong> 1514266  <strong>(15 of 50)</strong></td>
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<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
<th>B737 First Officer reported that Captain continued unstabilized approach to landing despite several warnings.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACN:</strong> 1514283  <strong>(14 of 50)</strong></td>
<td></td>
</tr>
<tr>
<td>ACN: 1514114 (16 of 50)</td>
<td></td>
</tr>
</tbody>
</table>
| **Synopsis**  
ZOA ARTCC Controller reported that while conducting training during a high volume, and complex period, a VFR pop-up was issued an IFR clearance below the MVA. |
| ACN: 1514096 (17 of 50) |  
| **Synopsis**  
EUG TRACON Controller reported not issuing prompt corrective vectors, after an aircraft flew through the localizer and below the MVA. |
| ACN: 1513434 (18 of 50) |  
| **Synopsis**  
BE-400 flight crew reported they were given a low altitude alert by ATC on arrival into EKM when they apparently misunderstood a descent clearance. |
| ACN: 1513169 (19 of 50) |  
| **Synopsis**  
Air carrier flight crew reported they received a descent clearance to an altitude below the FAF altitude. The crew stopped the descent and queried ATC. Shortly after level-off, the crew received a terrain warning and executed the prescribed recovery procedure. ATC then assigned a higher altitude. |
| ACN: 1512648 (20 of 50) |  
| **Synopsis**  
Air carrier flight crew reported receiving a low altitude alert from ATC on approach into EGE when they misread an altitude restriction. |
| ACN: 1512556 (21 of 50) |  
| **Synopsis**  
ERJ-175 flight crew reported flying too low after a false glideslope indication during a visual approach into DEN. |
| ACN: 1512363 (22 of 50) |  
| **Synopsis**  
GA pilot reported a low altitude alert from ATC after losing sight of the runway on a visual approach. |
| ACN: 1512163 (23 of 50) |  
|
Synopsis
Two ZSE Controllers reported issuing a pilot the lowest MIA available, at pilot's request. The pilot later questioned assigned altitude while descending below the MIA, causing a lower altitude alert.

ACN: 1511527 (24 of 50)

Synopsis
Single Pilot of a general aviation light aircraft reported a problem with the autopilot during an approach resulting in a low altitude alert from ATC.

ACN: 1511219 (25 of 50)

Synopsis
Air carrier Captain reported climbing in response to a GPWS terrain warning on a night approach to ITH.

ACN: 1511197 (26 of 50)

Synopsis
Air carrier flight crew reported climbing in response to a GPWS terrain warning at night on approach to EUG.

ACN: 1510842 (27 of 50)

Synopsis
Center Controller reported the Radar Controller issue a direct clearance to an aircraft below the Minimum Vectoring Altitude.

ACN: 1510818 (28 of 50)

Synopsis
EUG TRACON Controller reported issuing vectors that resulted with an aircraft flying below the Minimum Vector Altitude.

ACN: 1510565 (29 of 50)

Synopsis
TRACON Controller reported vectoring an aircraft below the Minimum Vectoring Altitude due to distraction.

ACN: 1510326 (30 of 50)

Synopsis
Tower Controller reported raising the awareness of a PC-12's low altitude on the ILS approach. Local controller issued low altitude alert, followed by clearance to execute a missed approach.

**ACN: 1510304 (31 of 50)**

**Synopsis**
Gulfstream Captain reported being climb restricted to 2000 feet, then receiving a terrain warning. ATC clarified clearance was to 5000 feet, not 2000 feet.

**ACN: 1510237 (32 of 50)**

**Synopsis**
CRJ700 pilot reported losing the ILS signal on approach due to an aircraft departing from an adjacent runway blocking the signal.

**ACN: 1510031 (33 of 50)**

**Synopsis**
BOI TRACON Controller reported vectoring an aircraft into a higher MVA after the aircraft was unable to climb fast enough.

**ACN: 1510024 (34 of 50)**

**Synopsis**
Tracon Controllers reported the Developmental commanded an aircraft to descended below the MVA.

**ACN: 1509851 (35 of 50)**

**Synopsis**
CRJ-200 Captain reported responding to CFIT obstacle warning on approach.

**ACN: 1509716 (36 of 50)**

**Synopsis**
ALB TRACON Controller reported an aircraft that checked in climbed to the wrong altitude and received a terrain alert.

**ACN: 1509520 (37 of 50)**

**Synopsis**
A319 pilot reported airborne conflict (RA) with VFR traffic during SID climb.

**ACN: 1509420 (38 of 50)**
Synopsis
CRJ-700 flight crew reported receiving an EGPWS terrain alert on a night visual approach into LSE airport.

ACN: 1509121 (39 of 50)

Synopsis
ZAB Center Controller reported vectoring an aircraft without knowing the aircraft's altitude, which may have been below the Minimum IFR altitude.

ACN: 1508868 (40 of 50)

Synopsis
A TRACON Controller reported assigning an aircraft an altitude below the Minimum Vectoring Altitude.

ACN: 1508507 (41 of 50)

Synopsis
Captain of an EMB-505 reported receiving, and complying with a GPWS obstacle-warning while at the ATC assigned altitude.

ACN: 1507924 (42 of 50)

Synopsis
Air Carrier flight crew reported a GPWS alert while in IMC conditions on radar vectors.

ACN: 1507523 (43 of 50)

Synopsis
ZLA ARTCC reported misreading Minimum IFR Altitude chart, contributing to an aircraft flying below the Minimum IFR Altitude.

ACN: 1507358 (44 of 50)

Synopsis
DA-2000 pilot reported low altitude alert while on visual approach, by both the aircraft systems and control tower.

ACN: 1507349 (45 of 50)

Synopsis
EMB-175 Captain reported that after making changes to the takeoff data he did not confirm the zero fuel weight. Captain also reported a CFTT warning during the takeoff.

ACN: 1507276 (46 of 50)
<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>ZLC certified professional controller reported issuing descent, which put aircraft into a subsequent higher MVA.</td>
</tr>
</tbody>
</table>

**ACN: 1507275 (47 of 50)**

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A Controller working the Radar Assist position and their trainee reported the Radar Controller allowed an aircraft to descend below the Minimum IFR Altitude even though they advised him of the MIA.</td>
</tr>
</tbody>
</table>

**ACN: 1507023 (48 of 50)**

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>A319 flight crew reported receiving an erroneous EGPWS terrain warning at ATC assigned altitude during night time vectors to ILS final. During the prescribed escape maneuver, a flight attendant suffered minor injury.</td>
</tr>
</tbody>
</table>

**ACN: 1507005 (49 of 50)**

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>B737 flight crew reported that during a rapid descent in IMC they flew through the localizer and received several warnings in rapid order &quot;SINK RATE&quot;, &quot;TOO LOW TERRAIN&quot;, and &quot;PULL UP&quot;.</td>
</tr>
</tbody>
</table>

**ACN: 1506906 (50 of 50)**

<table>
<thead>
<tr>
<th><strong>Synopsis</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>HIO Tower Controller reported issuing Low Altitude Warning to an aircraft on the ILS descended below the glideslope.</td>
</tr>
</tbody>
</table>
Report Narratives
ACN: 1524016 (1 of 50)

Time / Day
Date: 201803
Local Time Of Day: 1801-2400

Place
Locale Reference.Airport: SDF.Airport
State Reference: KY
Relative Position.Angle.Radial: 130
Relative Position.Distance.Nautical Miles: 15
Altitude.MSL.Single Value: 2600

Environment
Flight Conditions: VMC
Weather Elements / Visibility: Visibility: 30
Light: Night
Ceiling.Single Value: 10000

Aircraft
Reference: X
ATC / Advisory.Tower: SDF
Aircraft Operator: Air Carrier
Make Model Name: Widebody, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Nav In Use: FMS Or FMC
Flight Phase: Initial Approach
Route In Use: Visual Approach
Route In Use.STAR: DAMEN3
Airspace.Class E: SDF

Person: 1
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: First Officer
Function.Flight Crew: Pilot Flying
Qualification.Flight Crew: Air Transport Pilot (ATP)
Experience.Flight Crew.Total: 10500
Experience.Flight Crew.Last 90 Days: 75
Experience.Flight Crew.Type: 200
ASRS Report Number.Accession Number: 1524016
Human Factors: Situational Awareness
Human Factors: Confusion
**Narrative: 1**

SDF landing 17R, night VFR. At 11,000 on DAMEN3 arrival after crossing FRIZN at 250 Kts/11000 ft, we were cleared direct CHRCL down to 4000 then cleared to 3000 ft about 10 miles to CHRCL we were cleared visual we both had airport and were at 3000 ft. We agreed we had airport in sight and took visual. At this time I was putting in 2500 ft to cross CHRCL 2500. I asked for flaps then set speed and hit flight level change. I put in heading select and 10 degrees left of CHRCL because I felt a little high and a little fast and took a heading of 10 degrees left of CHRCL. I armed the LOC at about 2600 feet and we got "Caution Obstacle". I disconnected autopilot, leveled off and started a climb to 2700 ft. I could see a 1965 foot tower out my right window. I said I see obstacle. We then reestablished a direct path to CHRCL reengaged automation. I armed APP Mode and we came in and landed. After landing my Captain said "I was going to mention about the obstacle at the exact time we got the caution" in debrief. I know when I should configure, but being new to the plane I like to do it a little early. It was my fault. I should have stayed directly to CHRCL and slowed on profile.

**Narrative: 2**

When I contacted tower, First Officer put 2500 in the MCP window and selected FL change. He also selected heading select and turned left approx 10-20 degrees and armed LOC. As I was finishing transmission with tower I was about to tell him turning left and descending to 2500 was not necessary, we had plenty of time to slow and configure and that we were low-we got a predictive Obstacle alert/EPGWS. First Officer disconnected auto pilot and climbed back toward 3000 feet (I put it in the window). And we visually saw towers. I gave First Officer auto pilot center command and he continued configuring for approach
and we landed uneventfully. During debrief First Officer said he had to go around one time coming into SDF because he was too fast and high and he believes this is why he was concerned about getting down and slowed in time.

**Synopsis**

Air carrier flight crew reported receiving a EGPWS "Caution Obstacle" on visual approach to SDF. The crew simultaneously visually acquired the tower that likely caused the warning and returned to on-course and landed uneventfully.
ACN: 1523317 (2 of 50)

Time / Day
Date: 201803
Local Time Of Day: 1201-1800

Place
Locale Reference.Airport: MHLM.Airport
State Reference: FO

Environment
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.Center: MHTG
Aircraft Operator: Air Carrier
Make Model Name: Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Nav In Use: FMS Or FMC
Nav In Use: GPS
Flight Phase: Initial Approach
Route In Use: Visual Approach

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: Captain
Function.Flight Crew: Pilot Flying
Qualification.Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number.Accession Number: 1523317

Events
Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Person: Flight Crew
When Detected: In-flight
Result.General: None Reported / Taken

Assessments
Contributing Factors / Situations: Chart Or Publication
Primary Problem: Chart Or Publication

Narrative: 1
RNAV Visual Runway 04 approach, "Caution Terrain" EGPWS warning triggered halfway through turn after SAP11 fix. Flaps 2 and speed 190 as per approach. Enhanced GPWS corresponding yellow. Aircraft on autopilot with green "FINAL APP" and aircraft on path on course in visual conditions with 20 mile visibility. Disengaged autopilot and flew to landing.

10-4 does note RNAV 04V for "visual guidance" however the approach as built should not be triggering terrain warnings or 10-4 pages should note possible warnings. Approach is inaccurate.

Synopsis

Air carrier Captain reported the company's 10-4 chart for the RNAV visual to Runway 4 at MHLM is inaccurate and resulted in an unnecessary EGPWS alert.
**Time / Day**
- Date: 201803
- Local Time Of Day: 0601-1200

**Place**
- Locale Reference.Airport: ZZZZ.Airport
- State Reference: FO

**Environment**
- Flight Conditions: VMC
- Light: Daylight

**Aircraft**
- Reference: X
- ATC / Advisory.Center: ZZZZ
- Aircraft Operator: Air Carrier
- Make Model Name: B757-200
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Nav In Use: GPS
- Nav In Use: FMS Or FMC
- Flight Phase: Initial Approach

**Person**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function.Flight Crew: Captain
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- ASRS Report Number.Accession Number: 1523316
- Human Factors: Training / Qualification
- Human Factors: Situational Awareness

**Events**
- Anomaly.Deviation - Procedural: Published Material / Policy
- Anomaly.Inflight Event / Encounter: Unstabilized Approach
- Anomaly.Inflight Event / Encounter: CFTT / CFIT
- Detector.Person: Flight Crew
- When Detected: In-flight
- Result.General: None Reported / Taken

**Assessments**
- Contributing Factors / Situations: Human Factors
- Primary Problem: Human Factors

**Narrative:** 1
Set up and briefed GPS approach. Unable to get lower altitude due to frequency congestion. When cleared for approach, the MDA altitude was set in window. When it became apparent we would not be able to get down, a 360 turn was requested to join final with a visual approach. I failed reset the altitude to the higher FAF altitude and continued descent until ground proximity alerted me to my error. A climb back to a higher altitude was made and a normal landing was completed.

Task saturation during transition from instrument approach to visual approach caused failure to change altitude target. If switching from IMC approach to a new type of approach, remember to set the correct target altitude in alert window.

**Synopsis**

B757 Captain reported receiving a ground proximity alert while executing a 360-degree turn due to being too high on a GPS approach. Reporter recommended resetting the target descent altitude from MDA to FAF altitude when executing this maneuver.
ACN: 1521567 (4 of 50)

Time / Day
Date: 201802
Local Time Of Day: 1801-2400

Place
Locale Reference.Airport: EAT.Airport
State Reference: WA

Environment
Flight Conditions: VMC
Light: Night

Aircraft
Reference: X
ATC / Advisory.Center: ZSE
Make Model Name: Commercial Fixed Wing
Crew Size.Number Of Crew: 2
Flight Plan: IFR
Flight Phase: Initial Approach
Route In Use: Visual Approach
Airspace.Class E: ZSE

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Function.Flight Crew: Captain
Qualification.Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number.Accession Number: 1521567
Human Factors: Situational Awareness

Events
Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Person: Flight Crew
When Detected: In-flight
Result.General: None Reported / Taken

Assessments
Contributing Factors / Situations: Human Factors
Primary Problem: Human Factors

Narrative: 1
During a visual approach to Runway 30 in VMC conditions, the ground proximity alerted several times as we descended over a ridge to the southwest of the airport. If planning a visual approach plan accordingly to keep flight path inside the valley.

Synopsis
Pilot reported receiving several GPWS alerts while crossing a ridge line during a visual approach to EAT.
Time / Day
Date : 201802
Local Time Of Day : 0601-1200

Place
Locale Reference.Airport : BTV.Airport
State Reference : VT
Altitude.MSL.Single Value : 4000

Environment
Flight Conditions : VMC
Light : Daylight

Aircraft
Reference : X
ATC / Advisory.TRACON : BTV
Aircraft Operator : Air Carrier
Make Model Name : Medium Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 121
Flight Plan : IFR
Mission : Passenger
Nav In Use : FMS Or FMC
Nav In Use : GPS
Flight Phase : Initial Approach
Route In Use : Visual Approach
Airspace.Class C : BTV

Person
Reference : 1
Location Of Person.Aircraft : X
Location In Aircraft : Flight Deck
Reporter Organization : Air Carrier
Function.Flight Crew : Captain
Function.Flight Crew : Pilot Not Flying
Qualification.Flight Crew : Air Transport Pilot (ATP)
ASRS Report Number.Accession Number : 1520833
Human Factors : Situational Awareness

Events
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.General : None Reported / Taken

Assessments
Contributing Factors / Situations: Aircraft
Contributing Factors / Situations: Human Factors
Primary Problem: Ambiguous

Narrative: 1

Approach Control had asked us if we could see the airport about 10 miles to our north. I told him we needed space to get down. We were instructed to turn to heading 090. A minute later, we were cleared to maneuver as needed for the visual approach to 33. We were somewhere between 4,000 and 7,000 feet descending through visual conditions. I told my First Officer to fly past the extended centerline and come back since we needed a little bit more time to get down. He made that one "s-turn" then centered himself back onto the extended centerline. The snowflake in the FMS was starting to come alive from the bottom. Visually, we were in great shape. The GPS 33 was loaded in the FMS for situational awareness as well since the ILS 33 was out of service. Suddenly, we got a GPWS warning for "terrain terrain pull up." It confused us both as we could see that we were above all obstacles and terrain while transitioning towards 1,000 feet per minute well above 1,000 AGL. I helped the First Officer begin his pull up to clear the conflict. Once clear, we continued the approach to land without any issues. After landing, I did notice that if the ILS glide path was operating, it has a 3.2 degree descent angle rather than the standard 3.0 a normal ILS has or standard FMS descent angle.

In IMC, we absolutely would have gone around per our company SOPs not being able to see the ground. In this case, flying past the approach course over a small valley turning back towards the airport and descending towards rising terrain the GPWS was set off, however, both of us believed our actions were sufficient to clear the conflict safely without a go around procedure. In the future, I will ask for an instrument approach procedure to avoid any possible safety issue.

Synopsis

Air carrier Captain reported continuing the visual approach to BTV Runway 33 after receiving a GPWS terrain warning because all terrain was in sight.
**Time / Day**

Date: 201801
Local Time Of Day: 1801-2400

**Place**

Locale Reference.Airport: CWC.Airport
State Reference: TX
Relative Position.Distance.Nautical Miles: 2500
Altitude.AGL.Single Value: 300

**Environment**

Flight Conditions: VMC
Weather Elements / Visibility.Visibility: 30
Light: Night

**Aircraft**

Reference: X
ATC / Advisory.CTAF: CWC
Aircraft Operator: Personal
Make Model Name: Bonanza 35
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: None
Mission: Personal
Flight Phase: Final Approach
Route In Use: None
Airspace.Class G: CWC

**Person**

Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Instructor
Function.Flight Crew: Pilot Flying
Qualification.Flight Crew: Instrument
Qualification.Flight Crew: Air Transport Pilot (ATP)
Qualification.Flight Crew: Flight Instructor
Qualification.Flight Crew: Multiengine
Experience.Flight Crew.Total: 4800
Experience.Flight Crew.Last 90 Days: 25
Experience.Flight Crew.Type: 200
ASRS Report Number.Accession Number: 1515651

**Events**

Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Person: Flight Crew
Miss Distance.Vertical: 100
When Detected : In-flight
Result.General : None Reported / Taken

Assessments
Contributing Factors / Situations : Airport
Contributing Factors / Situations : Chart Or Publication
Contributing Factors / Situations : Environment - Non Weather Related
Primary Problem : Environment - Non Weather Related

Narrative: 1

I was coming in to land at night on runway 35 at Kickapoo downtown airport (CWC) in Wichita Falls, TX when I noticed that some newly erected high tension power lines that were installed on short final were not lighted and were within about 100 ft of my aircraft even when I was on the VASI glideslope. I knew the power lines were there since I am based out of Kickapoo and have been concerned about them ever since they started to install them, because they are about 2,500 ft from the threshold of the runway and are about 200 ft in height. After researching it more it seems they penetrate the obstacle clearance surface of 200 ft per NM for departures, making them a low closed-in obstacle and there are no NOTAMs out for the new obstructions on short final and none of the approach minima have been raised for the new obstacles. There are also no NOTAMs out or Trouble "T" on the approach plates to warn pilots of these new obstacles. I feel the power company just installed these high tension power lines without any coordination with the city or airfield manager and have created a hazard that will not only be dangerous to the locally based pilots, but especially to the transient aircraft that will have no idea the wires are there until they fly into them. I foresee a transient aircraft coming in on a perfectly clear VFR night following the VASIs until short final then resetting his/her aim point to land closer to the threshold not knowing the power lines are there and flying right into them. I need some help in either getting the power company to take the power lines down on short final and burying them, or at least putting lights on the poles and red balls on the wires. There also needs to be a NOTAM put out advising pilots of these hazards until the approach plates and airfield facility directory can be updated. I tried to call the FAA Safety numbers, but was unable to get past the computer selection to talk to a real person about this.

Synopsis
Beech V35 pilot reported noticing unmarked and uncharted power lines have been installed near the final approach course for Runway 35 at CWC Airport.
ACN: 1515327 (7 of 50)

Time / Day
Date: 201801
Local Time Of Day: 1801-2400

Place
Locale Reference: Airport: CVG.Airport
State Reference: KY
Altitude: MSL: Single Value: 2400

Environment
Flight Conditions: VMC
Light: Dusk

Aircraft
Reference: X
ATC / Advisory: Tower: CVG
Aircraft Operator: Air Carrier
Make Model Name: A320
Crew Size: Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Initial Approach
Airspace: Class B: CVG

Person: 1
Reference: 1
Location Of Person: Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function: Flight Crew: Captain
Function: Flight Crew: Pilot Flying
Qualification: Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number: Accession Number: 1515327
Human Factors: Situational Awareness

Person: 2
Reference: 2
Location Of Person: Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function: Flight Crew: First Officer
Function: Flight Crew: Pilot Not Flying
Qualification: Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number: Accession Number: 1515061

Events
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Became Reoriented

Assessments
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1
We were on the approach to 18L at CVG. I think we were at 3,000 feet (until established), cleared for the ILS 18L approach. So, after BAIRE, I elected to descend to 2,400 feet as per the approach plate. CVG Tower said they got a low altitude alert and asked if we were okay. Although we were below the glideslope, we were above the 2,400 stepdown to FRAZE. ATC made no further mention of the matter.

Narrative: 2
I was tuning tower frequency into the radio while on final approach. We were on the ILS in visual conditions and the Captain made the decision to descend to the localizer minimums for crossing the final approach fix. When I looked up and saw we had descended below the glideslope, I queried the Captain and he said he was descending to 2,400 feet. At that moment, Tower advised us to check our altitude immediately. We leveled off and rejoined the glideslope.

Synopsis
A320 flight crew reported descending below the glideslope on a approach to CVG and receiving a low altitude alert from the tower.
Time / Day
Date : 201801
Local Time Of Day : 1201-1800

Place
Locale Reference : ATC Facility : LCH.TRACON
State Reference : LA
Altitude : MSL. Single Value : 2000

Aircraft
Reference : X
ATC / Advisory : TRACON : LCH
Aircraft Operator : Government
Make Model Name : Fighter
Crew Size. Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Training
Nav In Use : Localizer/Glideslope/ILS : Runway 15
Flight Phase : Initial Approach
Route In Use : Vectors
Airspace. Class D : LCH

Person
Reference : 1
Location Of Person. Facility : LCH.TRACON
Reporter Organization : Government
Function : Air Traffic Control : Approach
Qualification : Air Traffic Control : Developmental
ASRS Report Number. Accession Number : 1515186
Human Factors : Training / Qualification
Human Factors : Situational Awareness

Events
Anomaly : Airspace Violation : All Types
Anomaly : ATC Issue : All Types
Anomaly : Deviation - Procedural : Published Material / Policy
Anomaly : Inflight Event / Encounter : CFTT / CFIT
Detector : Person : Air Traffic Control
When Detected : In-flight
Result : Air Traffic Control : Issued New Clearance

Assessments
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1
I was working approach control, vectoring Aircraft X on extended vectors for an opposite direction practice ILS approach, awaiting a departure to get airborne. When I saw that Aircraft X who was going extremely fast on his vector was getting close to an obstruction I turned him to avoid the obstruction clearance ring and he barely clipped the ring itself due to his wide turning. The minimum vectoring altitude over the obstruction is 2,300 ft and Aircraft X was at 2,000 ft and he was still 3 miles from the obstruction itself and higher than the obstruction. I should be quicker with turning a fast mover considering they make horribly wide turns.

Synopsis

LCH TRACON Developmental Controller reported vectoring an aircraft below the MVA.
ACN: 1514884 (9 of 50)

Time / Day
Date: 201801
Local Time Of Day: 1801-2400

Place
Locale Reference: Airport: SYR.Airport
State Reference: NY
Altitude: MSL: Single Value: 1600

Environment
Light: Night

Aircraft
Reference: X
ATC / Advisory: TRACON: SYR
Aircraft Operator: Air Carrier
Make Model Name: Regional Jet 700 ER/LR (CRJ700)
Crew Size: Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Initial Approach
Airspace: Class C: SYR

Person
Reference: 1
Location Of Person: Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function: Flight Crew: Captain
Function: Flight Crew: Pilot Not Flying
Qualification: Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number: Accession Number: 1514884
Human Factors: Situational Awareness

Events
Anomaly: Inflight Event / Encounter: CFTT / CFIT
Detector: Automation: Aircraft Terrain Warning
When Detected: In-flight
Result: Flight Crew: Became Reoriented

Assessments
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Procedure
Primary Problem: Human Factors

Narrative: 1
After being cleared for a visual approach, the First Officer descended to an altitude of 1,600 feet (the final approach fix altitude) on the downwind to Runway 28 at Syracuse. As we were about to turn base we were given a momentary EGPWS caution and then warning message. All terrain was in sight and verified by both pilots. We had briefed the terrain specifically on the approach. Later, we discovered there was a 1,600 foot tower that we believed to be much farther south from the course we were on regardless.

Night operations and general unfamiliarity of the terrain around the airport. It would be prudent to conduct a more thorough briefing of towers and obstacles that potentially come close to altitudes on the approach.

Synopsis

CRJ-700 Captain reported an EGPWS warning on a night visual approach to SYR related to a tower that was closer than expected.
Time / Day
Date: 201801
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: MFR.Airport
State Reference: OR
Altitude.MSL.Single Value: 5300

Environment
Flight Conditions: IMC
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.TRACON: EUG
Aircraft Operator: Air Carrier
Make Model Name: Medium Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Flight Phase: Descent
Airspace.Class E: EUG

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: Check Pilot
Function.Flight Crew: Pilot Not Flying
Qualification.Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number.Accession Number: 1514883
Human Factors: Situational Awareness

Events
Anomaly.ATC Issue: All Types
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Automation: Aircraft Terrain Warning
When Detected: In-flight
Result.Flight Crew: FLC complied w / Automation / Advisory
Result.Flight Crew: Executed Go Around / Missed Approach
Result.Air Traffic Control: Issued New Clearance

Assessments
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Procedure
Primary Problem: Ambiguous
Narrative: 1

[Inbound to] MFR, we received two terrain warnings after we were cleared for the ILS Runway 14. We were inbound from the south and vectored to the west over high terrain, which was a normal path for Runway 14. The first terrain warning occurred at 5,300 feet during vectors through the localizer. We were on a turn to 170 degrees to intercept the localizer, approximately 3 miles from AMASE. The course was alive and we heard the "TERRAIN TERRAIN" warning. The pilot flying initiated a climb and continued to track the localizer. As we passed 6,000 feet and climbing, we heard the second "TERRAIN" warning. The pilot flying expedited his climb to 8,000 feet. I told Cascade Approach that we were going missed and responding to a Terrain Warning. At that point, ATC gave us a new heading and told us to maintain 9,000 feet. Once at 9,000 I checked all three altimeters: 29.89, which was correct. Neither of us could determine what went wrong since we were within 1 dot of the localizer and above Cascade Approach's minimum vectoring altitude during each of the warnings.

We elected to try the ILS again. The bases near the airport were 4,000 feet and we both felt the terrain warnings were an aberration. Cascade Approach vectored us on the eastern side of the airport for a long left downwind for the ILS to Runway 14. From that point, everything proceeded normally.

We were in IMC getting vectored by Cascade Approach at 5,300 feet. This was an altitude that I thought was above Cascade's minimum vectoring altitude. Also, this altitude has worked in the past. So, I cannot say if there is an issue with the aircraft's terrain database or a problem with the vectoring by Cascade. I am not sure if there is a solution other than make MFR a VFR only airport for Part 121 operators until this issue is resolved.

Synopsis

Air carrier Check Airman reported receiving a GPWS terrain alert on approach to MFR in IFR conditions.
Established radio contact with on-ground first responders at 5 nm out from scene asking for Landing Zone (LZ) information. The first responders relayed that the LZ will be in the
middle of State highway X, with wires on the south side and north side and some wires crossing the highway at the east end of the LZ area which a police cruiser will be directly under for ID purposes. We as a crew discussed and noted that traffic was still moving on the highway. The moving traffic allowed us to utilize Crew Resource Management (CRM) while conducting two high reconnaissance to identify the obstacles and talk about them. Once we received a radio update from the ground crews that traffic was stopped we commenced our low reconnaissance and approach to the LZ. Winds were negligible and not a factor for landing, so I chose to land to the western heading of the LZ on the highway with all lights to our backs due to numerous car lights on and around the East end of the LZ. I did not want to be blinded under the Night Vision Goggles (NVGs) in the most critical stages of landing when clearance could be an issue. Trying to remain focused and visually aware of distances as we entered the approach phase of landing.

As we descended to the LZ, all three of us continued our discussion of the obstacles with the power lines on the south side of the road, power lines on the north side of the road and trees on the north side of the road, and the power line to the east of the LZ. As we descended and got closer to the road and wires, my flight nurse asked if we can slide right a little to give a bit more separation from the south side wires. I said okay and as I shifted the helicopter to the right simultaneously the main rotor blades made contact with tree branch(s) on the north side of the road/right side of helicopter. All three crew members acknowledged tree branches were being hit, what seemed lightly, since I did not feel any feedback in the BK117 flight controls and did not notice any rotor droop. I stopped the descent 20-30 feet above the ground with the idea of avoiding catastrophic damage to the blades from contacting the bigger/thicker branches at the bottom of the tree and raised collective to move helicopter up and away from the designated LZ for a clear field 50 yards to the south of the designated LZ. We climbed up and flew a mini/low reconnaissance circle around to the adjacent field of the designated LZ. We openly talked about any wires or obstacles in the field prior to landing in the field. Also, contacted the first responders that we will be cancelling the flight due to mechanical issues of the helicopter before landing into the field.

Landed helicopter safely down in the field and commenced shutdown procedures. During shutdown, we discussed what happened and talked about the medical crew going by ground with the first responders to aid if needed. Exited the helicopter, called Company Communications. Crew did their walk around while I made the two calls. After my calls, I conducted my post flight walk around looking for blade damage or any other problems. I did not notice any physical or structural damage and just wipe/smear marks in the dirt in the yellow blade tip area from the branch(s) contacting the blades. Logged the blade contact in the logbook and waited for maintenance to conduct inspections.

Synopsis

BK-117 pilot reported that after the main rotor contacted tree branches during a landing attempt, the helicopter was repositioned to land in a nearby field.
**Time / Day**

Date: 201801
Local Time Of Day: 0001-0600

**Place**

Locale Reference. Airport: SYR.Airport
State Reference: NY

**Environment**

Light: Night

**Aircraft**

Reference: X
ATC / Advisory. TRACON: SYR
Aircraft Operator: Air Carrier
Make Model Name: Medium Transport, Low Wing, 2 Turbojet Eng
Crew Size. Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Initial Approach
Airspace. Class C: SYR

**Person: 1**

Reference: 1
Location Of Person. Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function. Flight Crew: Pilot Flying
Function. Flight Crew: First Officer
Qualification. Flight Crew: Air Transport Pilot (ATP)
Qualification. Flight Crew: Multiengine
Qualification. Flight Crew: Instrument
ASRS Report Number. Accession Number: 1514808
Human Factors: Situational Awareness

**Person: 2**

Reference: 2
Location Of Person. Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function. Flight Crew: Pilot Not Flying
Function. Flight Crew: Captain
Function. Flight Crew: Check Pilot
Qualification. Flight Crew: Air Transport Pilot (ATP)
Qualification. Flight Crew: Multiengine
Qualification. Flight Crew: Instrument
ASRS Report Number. Accession Number: 1514809
Human Factors: Situational Awareness
Events

Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Airport
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1

While inbound to SYR cleared for the Visual Approach, the Captain and First Officer concurred on the initiation of a descent from 3,500 MSL to 1,600 MSL (inbound altitude for associated ILS). During the descent the GPWS "terrain" warning was activated as the aircraft flew in proximity to a tower. Upon initiation of the warning the Captain took control of the aircraft, disconnected the autopilot and initiated a climb. Upon reaching a safe altitude, the Captain returned the controls to the First Officer and a safe visual approach to landing was completed.

Narrative: 2

After being cleared for the visual approach to Runway 28, my First Officer started a descent towards the runway. I advised him that there was a tower in front of us to the right. He turned about another 10-15 degrees to the left. Approach Control came on and asked if we had the tower in sight, to which I replied we did. The aircraft terrain warning went off shortly thereafter. I immediately disconnected the autopilot, took controls and initiated a climb. We were already well past the tower at this time. Once level, I gave controls back to the First Officer and we continued to land without anything else happening.

Synopsis

Air carrier flight crew reported responding to a GPWS event during a visual approach to landing.
**Time / Day**

Date : 201801  
Local Time Of Day : 0601-1200

**Place**

Locale Reference.ATC Facility : ASE.TRACON  
State Reference : CO  
Altitude.MSL.Single Value : 13100

**Environment**

Light : Daylight

**Aircraft**

Reference : X  
ATC / Advisory.TRACON : ASE  
Make Model Name : Citation X (C750)  
Crew Size.Number Of Crew : 2  
Flight Plan : IFR  
Flight Phase : Descent  
Route In Use : Vectors  
Airspace.Class E : ASE

**Person**

Reference : 1  
Location Of Person.Facility : ASE.TRACON  
Reporter Organization : Government  
Function.Air Traffic Control : Instructor  
Function.Air Traffic Control : Approach  
Qualification.Air Traffic Control : Fully Certified  
ASRS Report Number.Accession Number : 1514683  
Human Factors : Training / Qualification  
Human Factors : Communication Breakdown  
Human Factors : Situational Awareness  
Communication Breakdown.Party1 : ATC  
Communication Breakdown.Party2 : ATC

**Events**

Anomaly.Airspace Violation : All Types  
Anomaly.ATC Issue : All Types  
Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Inflight Event / Encounter : CFTT / CFIT  
Detector.Person : Air Traffic Control  
When Detected : In-flight  
Result.Flight Crew : FLC complied w / Automation / Advisory  
Result.Air Traffic Control : Issued Advisory / Alert

**Assessments**
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Procedure
Primary Problem: Human Factors

**Narrative: 1**

I was [training a developmental] on a Radar session. The developmental is around 70 hours training on position and our level of traffic this session was below his ability level so I was allowing him to work the session with as little input from me as possible. We had a slow stream of arrivals with very few departures, at the time of the event we had, I believe, 1 aircraft on final already switched to tower and 2 other aircraft being vectored for the approach. There may have possible been a departure as well, but no aircraft were a factor with one another.

Aircraft X was a HAREI arrival and was on a 330 vector for the downwind initially descended to 16000 ft. I heard the developmental descend the aircraft to 13000 ft and the pilot readback the clearance more as a question than a statement. The developmental confirmed the 13000 ft altitude and the pilot readback the altitude with certainty. At this point Aircraft X was over a 13700 ft MVA. I noticed Aircraft X at 13700 ft and pointed this out to my developmental asking if he saw anything very wrong happening. He saw Aircraft X descending below 13700 ft and issued a low altitude alert and a climb to 14000 ft. Aircraft X ticked down to 13100 ft before showing a quick climb and level at 14000 ft.

Even though I heard the 13000 ft altitude issued I never visually correlated the control instruction with Aircraft X at the time the instruction was given. As this was a slow easy session I wasn't expecting the developmental to do anything, that easy, wrong. We normally descend aircraft in that position to 14000 ft and once on the base to 13000 ft, but since I didn't visually correlate the instruction with Aircraft X verbally hearing 13000 ft didn't raise a mental flag to me as 13000 ft is a commonly used altitude. When I saw Aircraft X at 13700 ft I assumed he had been assigned 14000 ft and was blowing through his assigned altitude. That's the point at which I realized that he was the aircraft that had been assigned 13000 ft.

Due to the low level of traffic and ability of the developmental I was complacent in how much attention I was giving the session. I also had an expectation bias that the developmental could easily handle the traffic with no problems and at this particular point of the session, with all traffic conflicts resolved, was not expecting this type of mistake.

**Synopsis**

ASE TRACON Controller reported that during training a Developmental descended an aircraft below the MVA.
**Time / Day**

- Date: 201801
- Local Time Of Day: 1201-1800

**Place**

- Locale Reference: ATC Facility: GEG.TRACON
- State Reference: WA
- Altitude MSL: Single Value: 7000

**Environment**

- Flight Conditions: IMC
- Weather Elements / Visibility: Rain
- Light: Daylight

**Aircraft**

- Reference: X
- ATC / Advisory: TRACON: GEG
- Aircraft Operator: Air Carrier
- Make Model Name: Large Transport, Low Wing, 2 Turbojet Eng
- Crew Size Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Nav In Use: FMS Or FMC
- Nav In Use Localizer/Glideslope/ILS: Runway 21
- Flight Phase: Initial Approach
- Flight Phase: Descent
- Route In Use: Vectors
- Route In Use STAR: HILIE TWO
- Airspace Class E: GEG

**Person: 1**

- Reference: 1
- Location Of Person: Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function: Flight Crew: Captain
- Function: Flight Crew: Pilot Flying
- Qualification: Flight Crew: Air Transport Pilot (ATP)
- Experience: Flight Crew: Total: 21500
- Experience: Flight Crew: Last 90 Days: 280
- Experience: Flight Crew: Type: 7000
- ASRS Report Number: Accession Number: 1514283
- Human Factors: Confusion

**Person: 2**

- Reference: 2
- Location Of Person: Aircraft: X
- Location In Aircraft: Flight Deck
Events

Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Air Traffic Control : Issued New Clearance

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Ambiguous

Narrative: 1

Flight to GEG on HILIE 2 arrival was cleared direct LUCEV fix on ILS 21 in GEG. Was cleared to descend 7,000 ft. We're level first got 2,500 GPS call out. Several minutes later got terrain warning. Immediately initiated climb First Officer advised ATC we had a terrain warning and were climbing. Leveled 9,000 ft. ATC said minimum vectoring altitude was 6,400 feet where we were. Descended and landed without further incident.

Narrative: 2

During our approach into GEG, we were given a descent to 7,000 feet by approach. We leveled off with the autopilot on, and noticed that the radar altimeter gave us an oral 2,500-foot call. Seconds later, we received the, "TERRAIN! TERRAIN!" and the Captain executed an EGPWS escape maneuver till we cleared the caution approximately 9,000 feet. I let approach control know what we were doing and at that time, she said the minimum safe vector altitude was 6,400 feet. After we finished the recovery procedure, we then asked to continue our descent and approach into Spokane.

Synopsis

Flight crew reported receiving an EGPWS warning and executing the prescribed escape maneuver; afterwards, ATC advised the crew of the MVA and re-cleared them for the approach.
ACN: 1514266 (15 of 50)

Time / Day
Date: 201801
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.AGL.Single Value: 200

Environment
Flight Conditions: VMC
Weather Elements / Visibility: Turbulence
Weather Elements / Visibility: Windshear
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.Tower: ZZZ
Aircraft Operator: Air Carrier
Make Model Name: B737 Undifferentiated or Other Model
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Landing
Airspace.Class C: ZZZ

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: First Officer
Function.Flight Crew: Pilot Not Flying
Qualification.Flight Crew: Air Transport Pilot (ATP)
Experience.Flight Crew.Type: 6550
ASRS Report Number.Accession Number: 1514266
Human Factors: Human-Machine Interface
Human Factors: Time Pressure
Human Factors: Workload
Human Factors: Communication Breakdown
Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: Flight Crew

Events
Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Inflight Event / Encounter: Weather / Turbulence
Anomaly.Inflight Event / Encounter: Unstabilized Approach
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

Short final, gusty winds 30 knots with about a 15 knot crosswind component and some turbulence. Visual approach, 30 flaps. Captain flying manually, autothrottles off. GPWS barks "Terrain," we are clear and visual with about one PAPI white and three red. Continued approach, "Pull up" call in the overrun, continued to land. Landed in touchdown zone. Flap load system activated on final. Taxied to gate.

Synopsis

B737 First Officer reported that Captain continued unstabilized approach to landing despite several warnings.
Time / Day
Date: 201801
Local Time Of Day: 0001-0600

Place
Locale Reference: Airport: TRK.Airport
State Reference: CA
Altitude: MSL: Single Value: 12000

Environment
Flight Conditions: VMC

Aircraft
Reference: X
ATC / Advisory: Center: ZOA
Aircraft Operator: Air Taxi
Make Model Name: PC-12
Crew Size: Number Of Crew: 2
Operating Under FAR Part: Part 135
Flight Plan: VFR
Mission: Passenger
Nav In Use: GPS
Nav In Use: FMS Or FMC
Flight Phase: Climb
Airspace: Class E: ZOA

Person
Reference: 1
Location Of Person: Facility: ZOA.ATRCC
Reporter Organization: Government
Function: Air Traffic Control: Instructor
Function: Air Traffic Control: Enroute
Qualification: Air Traffic Control: Fully Certified
Experience: Air Traffic Control: Time Certified In Pos 1 (yrs): 6
ASRS Report Number: Accession Number: 1514114
Human Factors: Training / Qualification
Human Factors: Workload
Human Factors: Situational Awareness

Events
Anomaly: ATC Issue: All Types
Anomaly: Deviation - Procedural: Published Material / Policy
Anomaly: Deviation - Procedural: Clearance
Anomaly: Inflight Event / Encounter: CFTT / CFIT
Detector: Person: Air Traffic Control
When Detected: In-flight
Result: Flight Crew: FLC complied w / Automation / Advisory
Result: Air Traffic Control: Issued New Clearance
Assessments
Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Airspace Structure
Primary Problem : Airspace Structure

Narrative: 1
This sector, 44, had been saturated with IFR arrivals to TRK, along with IFR departures, VFR to IFR pop ups and VFR flight following requests all associated with TRK airport. The entire training session was far more complex than what the sector can handle. I was an On the Job Training Instructor (OJTI) at the time, training a Developmental Controller on the position. After an hour on position and numerous stressors along with complex traffic volume/saturation, the situation in question occurred. Aircraft X, VFR popped up 15 EAST of HNW VOR requesting IFR. At the time, my Trainee was just recovering from over 8 IFR arrivals into a temporary towered airport. Aircraft X was given an IFR clearance below the Minimum IFR Altitude (MIA)/MVA. Although later confirmed that the pilot/aircraft had terrain in sight, we still failed to notice that the slow climbing PC-12 was below the MIA/MVA. Most of the aircraft into and out of TRK during this session had been CL30 or GLF high performing jets. WE SHOULD NOT HAVE BEEN TRAINING DURING THIS PERIOD, no matter how great the training experience could have been, safety was compromised.

I advise this event be reviewed in its entirety. The volume, complexity, and convoluted nature of a temporary tower at TRK and the inability of Northern California TRACON (NCT) to space or sequence for an arrival push is not only dangerous but [also] unacceptable. Although we do not have this consistent amount of volume on any given day, I still do believe that we should be trained better, or be more prepared for such a situation. Throughout my time here at ZOA, Sector 44 has been a nightmare of a sector, ever-changing procedures, and patters, temporary towers and airspace changes and lack of proper training in regards to TRK TEMPORARY TOWER. WE SHOULD HAVE NO BEEN TRAINING DURING THIS PERIOD.

I suggest that we give NCT the airspace between SILVER NUGGET and PARADISE BUTTES regardless of the issues this may cause without facility rating or level. SAFETY is our main concern.

Synopsis
ZOA ARTCC Controller reported that while conducting training during a high volume, and complex period, a VFR pop-up was issued an IFR clearance below the MVA.
ACN: 1514096 (17 of 50)

Time / Day
Date: 201801
Local Time Of Day: 0001-0600

Place
Locale Reference, ATC Facility: EUG.TRACON
State Reference: OR
Altitude, MSL, Single Value: 2400

Environment
Light: Daylight

Aircraft
Reference: X
ATC / Advisory, TRACON: EUG
Aircraft Operator: Corporate
Make Model Name: Citation Excel (C560XL)
Crew Size, Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Passenger
Nav In Use, Localizer/Glideslope/ILS: Runway 16R
Flight Phase: Initial Approach
Route In Use: Vectors
Airspace, Class D: EUG

Person
Reference: 1
Location Of Person, Facility: EUG.TRACON
Reporter Organization: Government
Function, Air Traffic Control: Approach
Qualification, Air Traffic Control: Fully Certified
ASRS Report Number, Accession Number: 1514096
Human Factors: Communication Breakdown
Communication Breakdown, Party 1: ATC
Communication Breakdown, Party 2: Flight Crew

Events
Anomaly, Airspace Violation: All Types
Anomaly, Deviation - Track / Heading: All Types
Anomaly, Deviation - Procedural: Published Material / Policy
Anomaly, Deviation - Procedural: Clearance
Anomaly, Inflight Event / Encounter: CFTT / CFIT
Detector, Person: Air Traffic Control
Were Passengers Involved In Event: N
When Detected: In-flight
Result, Flight Crew: FLC complied w / Automation / Advisory
Result, Air Traffic Control: Issued Advisory / Alert
Assessments
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Procedure
Primary Problem: Human Factors

Narrative: 1

Aircraft X was inbound to EUG from the east. Aircraft X checked in with the current ATIS and altitude. Aircraft X was issued vectors for the ILS Runway 16R approach. Aircraft X was issued a turn to the localizer and clearance for the ILS at 2,800 the read back was correct. Aircraft X flew through the localizer, I issued a 140 heading to join final. Aircraft X started descending through 2,800 in a 2,800 MVA. I advised Aircraft X it appeared they were descending through 2,800 and restated the 2,800 until established. Aircraft X replied, "We're considered established". I pointed out the airport and asked if Aircraft X had the airport in sight. Aircraft X had the airport in sight and was cleared for the visual approach to Runway 16R and switched to the tower. Brasher warning was not given.

I should have turned Aircraft X sooner to final so [that] the fly through didn't happen. In similar situation situations, I will reissue the altitude with the corrective heading to join final.

Synopsis

EUG TRACON Controller reported not issuing prompt corrective vectors, after an aircraft flew through the localizer and below the MVA.
Time / Day
   Date : 201801
   Local Time Of Day : 1201-1800

Place
   Locale Reference.Airport : EKM.Airport
   State Reference : IN
   Altitude.MSL.Single Value : 2500

Environment
   Flight Conditions : VMC
   Light : Daylight

Aircraft
   Reference : X
   ATC / Advisory.TRACON : SBN
   Aircraft Operator : Air Taxi
   Make Model Name : Beechjet 400
   Crew Size.Number Of Crew : 2
   Operating Under FAR Part : Part 91
   Flight Plan : IFR
   Mission : Ferry
   Flight Phase : Initial Approach
   Airspace.Class E : SBN

Person : 1
   Reference : 1
   Location Of Person.Aircraft : X
   Location In Aircraft : Flight Deck
   Reporter Organization : Air Taxi
   Function.Flight Crew : Captain
   Function.Flight Crew : Pilot Flying
   Qualification.Flight Crew : Air Transport Pilot (ATP)
   ASRS Report Number.Accession Number : 1513434
   Human Factors : Communication Breakdown
   Human Factors : Situational Awareness
   Communication Breakdown.Party1 : Flight Crew
   Communication Breakdown.Party2 : ATC

Person : 2
   Reference : 2
   Location Of Person.Aircraft : X
   Location In Aircraft : Flight Deck
   Reporter Organization : Air Taxi
   Function.Flight Crew : First Officer
   Function.Flight Crew : Pilot Not Flying
   Qualification.Flight Crew : Air Transport Pilot (ATP)
   ASRS Report Number.Accession Number : 1513715
   Human Factors : Communication Breakdown
Human Factors : Situational Awareness
Communication Breakdown.Party1 : Flight Crew
Communication Breakdown.Party2 : ATC

Events

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Returned To Clearance
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert

Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1
Flight was a reposition to EKM. While proceeding direct from ASHEN to EKM, we were issued a descent by Fort Wayne Approach to 2000. I distinctly remember the 2000 as I was planning my descent while keeping all the anti-ice equipment on and had to use speed brakes during the descent in order to keep the N2 at the required minimum of 70% for the wing anti-ice. We were handed off to South Bend Approach and were told to turn right to a heading of 320 (no altitude issued). Our next set of instructions were to turn left to 300 degrees, maintain 2,500 MSL until established, and cleared ILS 27. When we received those directions we were already at 2,300 MSL descending to 2,000 MSL. ATC issued us a low altitude warning and we mentioned we were cleared to 2,000. ATC said negative, we were cleared to 2,500. I requested a review of the tapes while I corrected the altitude to 2,500. The remainder of the approach was uneventful.

I suspect there was misinterpretation of our cleared altitude in the hand off between Fort Wayne Approach and South Bend Approach. Although 2,500 is the minimum altitude for that leg, we were in VMC below the clouds. I did not double check the assigned altitude at 2,000 MSL as I have encountered approach facilities that would assign altitudes lower than on the approach plate as long as we were above the MVA. The situation could have been prevented had we mentioned we were cleared to 2,000 MSL when we read back the heading to 320.

Narrative: 2
On letdown into South Bend airspace arriving empty into EKM, we were given and read back a descent from 8000 feet to 2000 feet. Both pilots were clear and certain about this. South Bend approach gave us a vector to intercept the final approach course and to maintain 2500 feet until established. At that time we were passing through 2300 feet to level 2000 feet. I immediately told ATC we were given 2000 feet. Controller came back saying, no we were given 2500 feet. [Captain] jumped in and told the controller we were given and read back 2000 feet while initiating a climb back to 2500. We landed normally.

On departure, South Bend told us he had listened to the tapes and we had been told and read back 2500. Well, okay. Makes me think we were given the descent out of 8000 feet
by the previous Controller. Ft Wayne or Terre Haute, not certain which.

What would I do to prevent this in the future? No idea. We were just flying along as normal. The radio transmissions were clear. We heard the same thing. If we both are gaga, then maybe it is time for the booby hatch.

**Synopsis**

BE-400 flight crew reported they were given a low altitude alert by ATC on arrival into EKM when they apparently misunderstood a descent clearance.
**ACN: 1513169 (19 of 50)**

**Time / Day**
- Date: 201801
- Local Time Of Day: 0601-1200

**Place**
- Locale Reference: Airport: ELP.Airport
- State Reference: TX
- Relative Position: Angle: Radial: 090
- Relative Position: Distance: Nautical Miles: 15
- Altitude: MSL: Single Value: 7400

**Environment**
- Flight Conditions: VMC
- Weather Elements / Visibility: Visibility: 5
- Light: Daylight
- Ceiling: Single Value: 5000

**Aircraft**
- Reference: X
- ATC / Advisory: TRACON: ELP
- Aircraft Operator: Air Carrier
- Make Model Name: Widebody, Low Wing, 2 Turbojet Eng
- Crew Size: Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Cargo / Freight
- Flight Phase: Initial Approach
- Route In Use: Vectors
- Airspace: Class E: ELP

**Person : 1**
- Reference: 1
- Location Of Person: Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function: Flight Crew: Captain
- Function: Flight Crew: Pilot Not Flying
- Qualification: Flight Crew: Air Transport Pilot (ATP)
- Experience: Flight Crew: Total: 10000
- Experience: Flight Crew: Last 90 Days: 45
- Experience: Flight Crew: Type: 5200
- ASRS Report Number: Accession Number: 1513169
- Human Factors: Situational Awareness
- Human Factors: Confusion

**Person : 2**
- Reference: 2
- Location Of Person: Aircraft: X
- Location In Aircraft: Flight Deck
Events
Anomaly.ATC Issue : All Types
Anomaly.Deviation - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Issued Advisory / Alert

Assessments
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1
Planned landing at ELP, day VMC conditions. FO was pilot Flying. Operating 2 hours late and 12.5 hours into our scheduled duty day of 10.5 hours. Upon checking in with El Paso Approach we were told to plan visual 8 approach. The previous ATIS was reporting RWY 26L in use. We had planned for and briefed the GPS 26L approach. We took note of the safety warnings in the Airport Briefing Guide which indicated both possible terrain warnings and a higher number of unstable approaches at the ELP airport. Due to safety concerns about not having an approach to RWY 8R we asked for the Visual to 26L so we could use the underlying GPS approach for safety. We were then given Visual to 26L proceed direct to BUSEY fix and descend and maintain 6000 feet. A steep descent was initiated due to the high number of unstable approaches, and also due to wanting to be down to FAF altitude 5 miles prior for sequencing and activation of the Profile Approach. Upon passing through 9000 feet the Pilot Monitoring realized that we were being vectored below the FAF altitude of 6900 feet, and also realized visually and on the Terrain display that Terrain was very close to our right. PM asked the controller to confirm our descent altitude of 6000 feet. Initially there was no response from the controller and the FO initiated a level off due to safety concerns. Shortly after the level off at around 7400 feet the controller came back and informed us he had a low level alert warning and for us to climb and maintain 8000 ft. We also simultaneously received a "Terrain Ahead" warning and the FO initiated a CFIT recovery maneuver and we leveled off at 8000 ft as instructed by ELP approach control.

We would like to think that we were given the descent altitude of 6000 feet in error and that the controller was the individual who made the mistake, but due to the sequence of events and the extended time on duty we may have either misunderstood the clearance or input the wrong altitude in the altitude select window.

Narrative: 2
Synopsis

Air carrier flight crew reported they received a descent clearance to an altitude below the FAF altitude. The crew stopped the descent and queried ATC. Shortly after level-off, the crew received a terrain warning and executed the prescribed recovery procedure. ATC then assigned a higher altitude.
ACN: 1512648 (20 of 50)

Time / Day
Date: 201801
Local Time Of Day: 0601-1200

Place
Locale Reference.Airport: EGE.Airport
State Reference: CO
Altitude.MSL.Single Value: 13000

Environment
Flight Conditions: VMC
Light: Daylight

Aircraft
Reference: X
ATC / Advisory.Center: ZDV
Aircraft Operator: Air Carrier
Make Model Name: Large Transport, Low Wing, 2 Turbojet Eng
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Nav In Use.Localizer/Glideslope/ILS: Runway 25
Flight Phase: Initial Approach
Airspace.Class E: ZDV

Person: 1
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: Pilot Flying
Function.Flight Crew: Captain
Qualification.Flight Crew: Air Transport Pilot (ATP)
Experience.Flight Crew.Type: 3456
ASRS Report Number.Accession Number: 1512648
Human Factors: Situational Awareness

Person: 2
Reference: 2
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: Pilot Not Flying
Function.Flight Crew: First Officer
Qualification.Flight Crew: Air Transport Pilot (ATP)
Experience.Flight Crew.Type: 3993
ASRS Report Number.Accession Number: 1512656
Human Factors: Situational Awareness
Events
Anomaly.Deviation - Altitude : Overshoot
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Air Traffic Control : Issued Advisory / Alert

Assessments
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1
In setting up for the LOC FMS 25 into EGE, I misread the crossing altitude at VOAXA of 13800 ft as 13000 ft from the 11-9A page. I had entered in the FMS to cross VOAXA at 170 kts/13000. The approach was flown in LNAV/VNAV with the autopilot on and prior to VOAXA, ATC issued a low altitude alert. There were no other electronic or visual warnings in the cockpit that warned of an unsafe flight condition. The flight was in VMC and we continued the approach to a normal landing. In briefing the approach the mistake was not identified by either of us since it was already in the FMS as 13000 ft and can look like 13800 ft if you look too quick.

Narrative: 2
[Report narrative contained no additional information.]

Synopsis
Air carrier flight crew reported receiving a low altitude alert from ATC on approach into EGE when they misread an altitude restriction.
ACN: 1512556 (21 of 50)

**Time / Day**
- Date: 201801
- Local Time Of Day: 1801-2400

**Place**
- Locale Reference.Airport: DEN.Airport
- State Reference: CO
- Altitude.MSL.Single Value: 7200

**Environment**
- Flight Conditions: VMC
- Light: Night

**Aircraft**
- Reference: X
- ATC / Advisory.Tower: DEN
- Aircraft Operator: Air Carrier
- Make Model Name: EMB ERJ 170/175 ER/LR
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Initial Approach
- Route In Use: Visual Approach
- Airspace.Class B: DEN

**Person: 1**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function.Flight Crew: Pilot Flying
- Function.Flight Crew: First Officer
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- ASRS Report Number.Accession Number: 1512556
- Human Factors: Confusion
- Human Factors: Situational Awareness

**Person: 2**
- Reference: 2
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function.Flight Crew: Pilot Not Flying
- Function.Flight Crew: Captain
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- ASRS Report Number.Accession Number: 1512560
- Human Factors: Confusion
- Human Factors: Situational Awareness
Events

Anomaly.Aircraft Equipment Problem : Less Severe
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Person : Flight Crew
When Detected : In-flight
Result.Flight Crew : Became Reoriented

Assessments

Contributing Factors / Situations : Aircraft
Contributing Factors / Situations : Airport
Contributing Factors / Situations : Environment - Non Weather Related
Primary Problem : Airport

Narrative: 1

On a night visual approach 16R. While turning to final at an altitude of about 7200 ft just outside the marker, glideslope showed we were two dots high, so per the AOM (Aircraft Operating Manual) I spun the altitude selector to 6400 ft, which was 1000 ft AGL, and engaged FPA (Flight Path Angle) to descend. As we got established on final, I realized we were low and so set the altitude back up to 6600 ft. I immediately disengaged autopilot and leveled off until we were back on proper glide path. Normal landing and normal conclusion of flight. [I suggest using] better cross-checking between glide scope and visual cues, especially at night.

Had not flown to Denver for nearly a year. A more thorough review for airports we have not been to in a while could have reminded us of the false glideslope issue and we could be ready for it.

Narrative: 2

We were on right base for the visual 16R into DEN and as we were about to intercept the localizer we got a false glideslope and the PF (Pilot Flying) had FPA (Flight Path Angle) dialed in to maintain the glideslope as we rolled out on final. It looked as if we were very high but as we captured the LOC we realized we were going to intercept the course outside the FAF. We were not sure if we were going to intercept inside the FAF, which is why the PF continued the descent below the FAF alt. Once we realized we were going to intercept outside the FAF we leveled off at 6300 ft. We crossed JETSN at 6300 ft MSL. We maintained altitude till we intercepted GS (Glideslope) and made an uneventful landing.

In the future I would try to make sure we intercept LOC outside of the FAF since the false GS is a known problem at DEN on 16R. That way we could make sure to not go below 7000 ft until JETSN. You could also do the RNAV Y 16R and use the vertical profile to help plan the descent.

Synopsis

ERJ-175 flight crew reported flying too low after a false glideslope indication during a visual approach into DEN.
**Time / Day**

Date: 201801

**Place**

Locale Reference: Airport: HHR.Airport
State Reference: CA
Altitude.MSL.Single Value: 1000

**Environment**

Flight Conditions: VMC
Weather Elements / Visibility: Haze / Smoke
Light: Daylight

**Aircraft**

Reference: X
ATC / Advisory.TRACON: SCT
Aircraft Operator: Personal
Make Model Name: Small Aircraft, Low Wing, 1 Eng, Retractable Gear
Crew Size.Number Of Crew: 1
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Personal
Flight Phase: Final Approach
Route In Use: Visual Approach
Route In Use: Vectors
Airspace.Class B: LAX

**Person**

Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Personal
Function.Flight Crew: Single Pilot
Qualification.Flight Crew: Private
Qualification.Flight Crew: Instrument
Experience.Flight Crew.Total: 1550
Experience.Flight Crew.Last 90 Days: 30
Experience.Flight Crew.Type: 250
ASRS Report Number.Accession Number: 1512363
Human Factors: Communication Breakdown
Human Factors: Situational Awareness
Human Factors: Distraction
Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: ATC

**Events**

Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Person: Air Traffic Control
When Detected: In-flight
Result. Flight Crew: Executed Go Around / Missed Approach
Result. Air Traffic Control: Issued Advisory / Alert
Result. Air Traffic Control: Issued New Clearance

Assessments
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Weather
Primary Problem: Human Factors

Narrative: 1
I was on a IFR flight plan flying to HHR, an airport I am not familiar with trying to land under a Visual approach had the airport in sight when ATC flew me over it then they flew me out about 6 miles to line up for the approach and I lost sight of the runway I did not report that to ATC hoping I would pick up the runway again then ATC starts saying Low altitude alert pull up which I did and they redirected me out for another approach this time using the LOC D approach. Once I got that set up I followed it in then on the ground they told me to call them which I did.

Synopsis
GA pilot reported a low altitude alert from ATC after losing sight of the runway on a visual approach.
ACN: 1512163 (23 of 50)

Time / Day
Date: 201801
Local Time Of Day: 1201-1800

Place
Locale Reference: ATC Facility: ZSE.ARTCC
State Reference: WA
Altitude MSL Single Value: 6300

Aircraft
Reference: X
ATC / Advisory Center: ZSE
Aircraft Operator: Air Taxi
Make Model Name: PC-12
Crew Size Number Of Crew: 1
Operating Under FAR Part: Part 135
Flight Plan: IFR
Mission: Ambulance
Flight Phase: Descent

Person: 1
Reference: 1
Location Of Person Facility: ZSE.ARTCC
Reporter Organization: Government
Function: Air Traffic Control: Enroute
Qualification: Air Traffic Control: Fully Certified
ASRS Report Number: Accession Number: 1512163
Human Factors: Communication Breakdown
Communication Breakdown Party1: ATC
Communication Breakdown Party2: Flight Crew

Person: 2
Reference: 2
Location Of Person Facility: ZSE.ARTCC
Reporter Organization: Government
Function: Air Traffic Control: Enroute
Qualification: Air Traffic Control: Fully Certified
ASRS Report Number: Accession Number: 1512158
Human Factors: Communication Breakdown
Communication Breakdown Party1: ATC
Communication Breakdown Party2: Flight Crew

Events
Anomaly: Airspace Violation: All Types
Anomaly: ATC Issue: All Types
Anomaly: Deviation - Altitude: Overshoot
Anomaly: Deviation - Procedural: Clearance
Anomaly: Deviation - Procedural: Published Material / Policy
Anomaly: Inflight Event / Encounter: CFTT / CFIT
Assessments

Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

[Aircraft] requesting lowest available altitude. Cleared to MIA of 6600 msl. Aircraft read back 6600. Aircraft then asks if the altitude was 6300 or 6600. Clarified to aircraft that the clearance was to 6600. Aircraft descends below MIA to 6300 mode-c reported before correcting to 6600. The moment the altitude was questioned, a Low altitude alert should have been issued for safety.

Narrative: 2

[Report narrative contained no additional information.]

Synopsis

Two ZSE Controllers reported issuing a pilot the lowest MIA available, at pilot's request. The pilot later questioned assigned altitude while descending below the MIA, causing a lower altitude alert.
**ACN: 1511527** (24 of 50)

### Time / Day
- Date: 201801
- Local Time Of Day: 0001-0600

### Place
- Locale Reference: Airport: SAC.Airport
- State Reference: CA
- Altitude.MSL.Single Value: 500

### Environment
- Flight Conditions: IMC
- Weather Elements / Visibility: Fog
- Weather Elements / Visibility. Visibility: 2
- Light: Daylight
- Ceiling. Single Value: 400

### Aircraft
- Reference: X
- ATC / Advisory. Tower: SAC
- Aircraft Operator: Personal
- Make Model Name: Small Aircraft, Low Wing, 1 Eng, Retractable Gear
- Crew Size. Number Of Crew: 1
- Operating Under FAR Part: Part 91
- Flight Plan: IFR
- Mission: Personal
- Nav In Use: GPS
- Flight Phase: Final Approach
- Route In Use. Other
- Airspace. Class D: SAC

### Person
- Reference: 1
- Location Of Person. Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Personal
- Function. Flight Crew: Pilot Flying
- Function. Flight Crew: Single Pilot
- Qualification. Flight Crew: Instrument
- Qualification. Flight Crew: Commercial
- Experience. Flight Crew. Total: 2050
- Experience. Flight Crew. Last 90 Days: 25
- Experience. Flight Crew. Type: 300
- ASRS Report Number. Accession Number: 1511527
- Human Factors: Distraction
- Human Factors: Troubleshooting

### Events
- Anomaly. Aircraft Equipment Problem: Less Severe
- Anomaly. Deviation - Altitude: Overshoot
I inadvertently descended below approach segment altitudes while on the RNAV GPS RWY2 approach into SAC. The ceilings were at minimum when I started the approach. I was going to the airport to have an intermittently malfunctioning auto pilot repaired. The auto pilot malfunctioned as I started the approach and I failed to notice that the Garmin 430W indicated LNAV instead of LPV and there was no glide slope. While dealing with the malfunctioning auto pilot I descended below the published segment altitudes and received low altitude alerts from the controllers. I climbed and then continued the approach and successfully landed. The problem was that the malfunctioning auto pilot distracted me and I didn't notice the LNAV indication before beginning the approach. I wasn't properly prepared for an approach without the glide slope or auto pilot.

I learned that when something unexpected happens on an approach, go missed approach and sort things out away from the airport. I would not have continued an LNAV approach down to minimums with no glide slope and a malfunctioning autopilot if I hadn't been distracted and had realized that it was going to be a LNAV approach instead of a LPV approach. Fortunately, the approach ended well.

Synopsis

Single Pilot of a general aviation light aircraft reported a problem with the autopilot during an approach resulting in a low altitude alert from ATC.
**ACN: 1511219**  
* (25 of 50)

**Time / Day**
- Date: 201801
- Local Time Of Day: 1801-2400

**Place**
- Locale Reference.Airport: ITH.Airport
- State Reference: NY
- Altitude.MSL.Single Value: 2800

**Environment**
- Flight Conditions: VMC
- Light: Night

**Aircraft**
- Reference: X
- ATC / Advisory.Tower: ITH
- Aircraft Operator: Air Carrier
- Make Model Name: Medium Transport, Low Wing, 2 Turbojet Eng
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Initial Approach
- Airspace.Class E: ITH

**Person**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function.Flight Crew: Pilot Flying
- Function.Flight Crew: Captain
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- Experience.Flight Crew.Type: 1220
- ASRS Report Number: Accession Number: 1511219
- Human Factors: Situational Awareness

**Events**
- Anomaly.Inflight Event / Encounter: Fuel Issue
- Anomaly.Inflight Event / Encounter: CFTT / CFIT
- Detector.Automation: Aircraft Terrain Warning
- Detector.Person: Flight Crew
- When Detected: In-flight
- Result.Flight Crew: Became Reoriented
- Result.Flight Crew: Took Evasive Action

**Assessments**
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

**Narrative: 1**

During cruise flight, we noticed that the landing fuel was going to be close/over max landing weight. We discussed the potential problem and talked about how to make sure we were below max landing weight before the FAF on the approach into ITH. Our plan was to configure early and use flaps/speed brake to burn extra fuel and if we were still to close we would perform a hold over the FAF (VRNAH) to burn the extra fuel. We began the approach and configured early to try and help with fuel burn. As we neared the FAF we determined that we would need to perform one turn in holding over the VRNAH. We advised tower of our fuel issue and made the request to hold over the FAF (Standard Hold) at 3000 ft. After a slight delay with ATC coordination, the controller came back and said "approved as requested." By this time we were already past the FAF around 2800 ft. I disconnected the Autopilot, added power, began a shallow climb back to 3000 ft, began a right turn to the outbound course, and called for FLAPS 9. After a positive rate was established, I called for GEAR UP. Once we were on the outbound course abeam VRNAH, the aural warning "LANDING GEAR" began to sound. We attempted to silence the warning but it would just come back on. About 20 seconds later, we received an aural "TERRAIN, PULL UP" warning. I immediately responded by adding power and established a climb to the MSA (3700 ft).

I had previously placed the MFD on terrain mode knowing that the Ithaca area was surrounded by shallow hills. During the GPWS event, I never saw any terrain indication on the MFD. Quickly after reaching the MSA, we realized that there were two towers at 2279 ft and 2101 ft that likely caused the GPWS warning. By this time, we knew we were good on fuel and landing weight, and clear of any terrain/obstacles. We advised tower that we were ready to turn inbound and re-intercept the localizer. They cleared us to land, and I began reconfiguring for the ILS. We performed the approach without issue and landed on Rwy 32 without event.

The GPWS alarm went off most likely because of the towers less than 1000 ft below us up ahead. We assumed 3000 ft would be a safe altitude for our holding maneuver since there was a published hold on the approach chart and ATC approved our request at that specific altitude. We also knew the highest obstacle was at 2302 ft far to the NE of the field. We overlooked the fact that we would be flying over those towers and they could potentially trigger the GPWS.

I believe our plan to deal with the fuel issue was good in theory. We were also reassured when ATC cleared us "as requested." We overlooked the fact that even though 3000' was the platform altitude, the two towers at 2279 and 2101 would potentially cause the GPWS to activate. We should have performed the maneuver at a higher altitude (3700 ft).

**Synopsis**

Air carrier Captain reported climbing in response to a GPWS terrain warning on a night approach to ITH.
**ACN: 1511197 (26 of 50)**

**Time / Day**

Date: 201801  
Local Time Of Day: 1801-2400

**Place**

Locale Reference.Airport: EUG.Airport  
State Reference: OR  
Altitude.MSL.Single Value: 4400

**Environment**

Flight Conditions: VMC  
Light: Night

**Aircraft**

Reference: X  
ATC / Advisory.TRACON: EUG  
Aircraft Operator: Air Carrier  
Make Model Name: Large Transport, Low Wing, 2 Turbojet Eng  
Crew Size.Number Of Crew: 2  
Operating Under FAR Part: Part 121  
Flight Plan: IFR  
Mission: Passenger  
Nav In Use.Localizer/Glideslope/ILS: Runway 16R  
Flight Phase: Final Approach  
Route In Use: Vectors  
Airspace.Class E: EUG

**Person : 1**

Reference: 1  
Location Of Person.Aircraft: X  
Location In Aircraft: Flight Deck  
Reporter Organization: Air Carrier  
Function.Flight Crew: Pilot Flying  
Function.Flight Crew: Captain  
Qualification.Flight Crew: Air Transport Pilot (ATP)  
Experience.Flight Crew.Type: 526  
ASRS Report Number.Accession Number: 1511197  
Human Factors: Situational Awareness

**Person : 2**

Reference: 2  
Location Of Person.Aircraft: X  
Location In Aircraft: Flight Deck  
Reporter Organization: Air Carrier  
Function.Flight Crew: Pilot Not Flying  
Function.Flight Crew: First Officer  
Qualification.Flight Crew: Air Transport Pilot (ATP)  
Experience.Flight Crew.Type: 1807
Initially we were direct Eugene airport, cleared down to 6000 ft, and planning Cat 3 ILS 16R due to some low level light fog on the ATIS. Fog did not exist and we were VMC night conditions. ATC assigned a heading approximately 300 and cleared us down to 4,400 ft for a downwind leg, autopilot was on. I was looking out the left window at the airport when I noticed a tower go by the left side of the airplane that looked fairly close at night. Approximately 5 seconds after that the GPWS TERRAIN warning sounded. I clicked off the autopilot and performed the Terrain Escape maneuver. I don't believe more than 3 or 4 terrain warnings sounded and never got the PULL UP. MVA is 5,300 ft so I directed the FO (First Officer) to set 8,000 ft and started recovering the airplane passing 6,000 ft. The FO as PM (Pilot Monitoring) notified Approach Control of our situation and that we were climbing rapidly. After recovery, the FO told ATC what happened and ATC responded that a few airplanes had gotten warnings and done the same thing including a couple RJ’s in that exact location. ATC confirmed that where we were located the MVA for them is 4,400 ft. We extended our downwind slightly to return to an appropriate approach profile. ATC vectored us for final and asked if we were ok to continue the approach out of concern. We continued and the rest of the flight was uneventful.

While being vectored for the ILS 16R and approximately due east of the final approach fix MACTA, we got a GPWS terrain warning. We were level at the ATC assigned altitude of 4,400 ft. and headed north on a radar downwind when the warning sounded. After we escaped and leveled off at 6,000 ft., the Controller admitted other crews had recently gotten GPWS terrain warnings in the same location at 4,400 ft.

Air carrier flight crew reported climbing in response to a GPWS terrain warning at night on approach to EUG.
Time / Day
Date : 201801
Local Time Of Day : 0601-1200

Place
Locale Reference, ATC Facility : ZAB.ARTCC
State Reference : NM
Altitude, MSL, Single Value : 7400

Environment
Flight Conditions : VMC
Light : Daylight

Aircraft
Reference : X
ATC / Advisory, Center : ZAB
Aircraft Operator : Personal
Make Model Name : Skylane 182/RG Turbo Skylane/RG
Crew Size, Number Of Crew : 1
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Personal
Flight Phase : Initial Climb
Route In Use : Direct
Airspace, Class E : ZAB

Person
Reference : 1
Location Of Person, Facility : ZAB.ARTCC
Reporter Organization : Government
Function, Air Traffic Control : Enroute
Qualification, Air Traffic Control : Fully Certified
Experience, Air Traffic Control, Time Certified In Pos 1 (yrs) : 1
ASRS Report Number, Accession Number : 1510842
Human Factors : Workload
Human Factors : Situational Awareness

Events
Anomaly, ATC Issue : All Types
Anomaly, Deviation - Procedural : Published Material / Policy
Anomaly, Deviation - Procedural : Clearance
Anomaly, Inflight Event / Encounter : CFTT / CFIT
Detector, Person : Air Traffic Control
When Detected : In-flight

Assessments
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure  
Primary Problem : Human Factors

**Narrative: 1**

I was assigned to help the Radar Controller who was busy and dealing with some complexity. When I signed on as the Assist, I got straight to work without a briefing because the Radar Controller was clearly dealing with too much. He did give me some key points verbally. One being, that he gave a release to an aircraft climbing to 12000 feet westbound to intercept an airway. He had an aircraft inbound from the south. When the departure came off, he was slow moving and slow climbing. This caused the Radar Controller to make a decision to clear the aircraft direct to a fix, which would mean his westbound turn would be quicker so he could get him out of the way of the arrival. The problem is he didn't ask the aircraft if he could maintain his own terrain and obstruction clearance to through 10000 feet since he was in a 9300 feet terrain block. I don't feel there was much I could do at that point since this was the radar controller's decision. I would recommend the Radar Controller to come up with a better solution to avoid this mistake.

**Synopsis**

Center Controller reported the Radar Controller issue a direct clearance to an aircraft below the Minimum Vectoring Altitude.
**Time / Day**

Date: 201801  
Local Time Of Day: 0001-0600

**Place**

Locale Reference.ATC Facility: EUG.TRACON  
State Reference: OR  
Altitude.MSL.Single Value: 3000

**Aircraft**

Reference: X  
ATC / Advisory.TRACON: EUG  
Aircraft Operator: Personal  
Make Model Name: Small Transport, Low Wing, 2 Turboprop Eng  
Crew Size.Number Of Crew: 2  
Operating Under FAR Part: Part 91  
Flight Plan: IFR  
Mission: Personal  
Flight Phase: Final Approach  
Route In Use: Vectors  
Airspace.Class D: EUG

**Person**

Reference: 1  
Location Of Person.Facility: EUG.TRACON  
Reporter Organization: Government  
Function.Air Traffic Control: Approach  
Qualification.Air Traffic Control: Fully Certified  
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs): 7  
ASRS Report Number.Accession Number: 1510818  
Human Factors: Situational Awareness  
Human Factors: Confusion

**Events**

Anomaly.ATC Issue: All Types  
Anomaly.Deviation - Procedural: Published Material / Policy  
Anomaly.Inflight Event / Encounter: CFTT / CFIT  
Detector.Person: Air Traffic Control  
When Detected: In-flight  
Result.Flight Crew: FLC complied w / Automation / Advisory  
Result.Air Traffic Control: Issued New Clearance  
Result.Air Traffic Control: Issued Advisory / Alert

**Assessments**

Contributing Factors / Situations: Human Factors  
Primary Problem: Human Factors

**Narrative:** 1
Aircraft X had the wrong frequency dialed in for the localizer and joined the wrong final. Approach Clearance was canceled and pilot was climbed to 3000 feet. Vectors were issued and the correct localizer frequency was given. A turn to a 340 heading was issued. Aircraft X entered the 3900 feet Minimum Vectoring Altitude (MVA) at 3000 feet and was issued a climb to 4000 feet. My supervisor (in training) was sitting beside me. Either he thought I issued the turn in time to avoid the 3900 feet MVA (as I thought I did) or he said nothing and watched the aircraft enter the 3900 feet MVA. He said nothing to me until he informed me I needed to fill out an Occurrence Report.

**Synopsis**

EUG TRACON Controller reported issuing vectors that resulted with an aircraft flying below the Minimum Vector Altitude.
ACN: 1510565 (29 of 50)

Time / Day
Date: 201801
Local Time Of Day: 0001-0600

Place
Locale Reference.ATC Facility: P50.TRACON
State Reference: AZ
Altitude.MSL.Single Value: 5200

Environment
Flight Conditions: VMC

Aircraft: 1
Reference: X
ATC / Advisory.TRACON: P50
Aircraft Operator: Air Carrier
Make Model Name: B737 Undifferentiated or Other Model
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Initial Approach
Flight Phase: Descent
Route In Use: Vectors
Airspace.Class B: PHX

Aircraft: 2
Reference: Y
ATC / Advisory.TRACON: P50
Make Model Name: Any Unknown or Unlisted Aircraft Manufacturer
Flight Phase: Initial Approach

Person
Reference: 1
Location Of Person.Facility: P50.TRACON
Reporter Organization: Government
Function.Air Traffic Control: Approach
Qualification.Air Traffic Control: Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs): 4
ASRS Report Number.Accession Number: 1510565
Human Factors: Situational Awareness
Human Factors: Workload
Human Factors: Distraction

Events
Anomaly.ATC Issue: All Types
Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Assessments

Contributing Factors / Situations : Procedure
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1

I was working finals combined and there was a runway closed. We had a flight under medical distress straight in and he was tied up with an arrival from the north, so I crossed the arrival over the airport for the south downwind to get behind the distressed Aircraft. I vectored the downwind in closer to the airport and descended them to 5000 feet. I thought the vector I gave them would keep them clear of the Minimum Vectoring Altitude (MVA) and then got caught up watching the distressed Aircraft. The Aircraft just clipped the corner of the 5700-foot MVA as I turned them on to base leg. I just needed to not be so focused on the emergency because everything was worked out fine there. I just misjudged the vector.

Synopsis

TRACON Controller reported vectoring an aircraft below the Minimum Vectoring Altitude due to distraction.
ACN: 1510326 (30 of 50)

**Time / Day**
- Date: 201712
- Local Time Of Day: 1801-2400

**Place**
- Locale Reference.Airport: HIO.Airport
- State Reference: OR
- Altitude.MSL.Single Value: 500

**Environment**
- Flight Conditions: IMC
- Weather Elements / Visibility: Visibility 3/4
  Ceiling.Single Value: 300

**Aircraft**
- Reference: X
- ATC / Advisory.Tower: HIO
- Aircraft Operator: Personal
- Make Model Name: PC-12
- Crew Size.Number Of Crew: 1
- Operating Under FAR Part: Part 91
- Flight Plan: IFR
- Mission: Personal
- Nav In Use.Localizer/Glideslope/ILS: ILS/LOC RWY 13R
- Flight Phase: Final Approach
- Route In Use.Other
- Airspace.Class D: HIO

**Person**
- Reference: 1
- Location Of Person.Facility: HIO.TOWER
- Reporter Organization: Government
- Qualification.Air Traffic Control: Fully Certified
- ASRS Report Number.Accession Number: 1510326

**Events**
- Anomaly.Deviation - Procedural: Clearance
- Anomaly.Deviation - Procedural: Published Material / Policy
- Anomaly.Inflight Event / Encounter: CFTT / CFIT
- Detector.Person: Air Traffic Control
- When Detected: In-flight
- Result.Flight Crew: Executed Go Around / Missed Approach
- Result.Flight Crew: FLC complied w / Automation / Advisory
- Result.Air Traffic Control: Issued Advisory / Alert
- Result.Air Traffic Control: Issued New Clearance

**Assessments**
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Weather
Primary Problem : Human Factors

**Narrative: 1**

The field was IFR and visibility was 3/4SM and ceiling Overcast at 300 feet. A Pilatus (PC-12) was inbound on the ILS talking to the local controller. I advised the local controller that he was really low a little over six miles out. The local controller issued a low altitude alert and I advised the local controller that the aircraft was continuing to descend (he was about 500 feet about five miles out). The local controller told him to execute the missed approach and start climbing. The PC-12 complied and then advised that they were going to break off and go back to [departure airport]. The local controller told him to continue on the missed approach. We properly coordinated with Portland TRACON and the TRACON controller advised that they had also had trouble with the PC-12 vectoring him inbound and they believed that it was due to lack of pilot experience.

**Synopsis**

Tower Controller reported raising the awareness of a PC-12's low altitude on the ILS approach. Local controller issued low altitude alert, followed by clearance to execute a missed approach.
**ACN: 1510304** (31 of 50)

**Time / Day**
- Date: 201801
- Local Time Of Day: 1201-1800

**Place**
- Locale Reference.ATC Facility: ZZZ.TRACON
- State Reference: US
- Relative Position.Distance.Nautical Miles: 3
- Altitude.MSL.Single Value: 2000

**Environment**
- Flight Conditions: IMC
- Weather Elements / Visibility: Snow
- Weather Elements / Visibility.Visibility: 2
- Light: Night
- Ceiling.Single Value: 800

**Aircraft**
- Reference: X
- ATC / Advisory.TRACON: ZZZ
- Aircraft Operator: Corporate
- Make Model Name: Gulfstream V / G500 / G550
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 91
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Takeoff
- Route In Use: Vectors
- Airspace.Class E: ZZZ

**Person**
- Reference: 1
- Location Of Person.Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Corporate
- Function.Flight Crew: Captain
- Function.Flight Crew: Pilot Not Flying
- Qualification.Flight Crew: Air Transport Pilot (ATP)
- Qualification.Flight Crew: Multiengine
- Experience.Flight Crew.Total: 7100
- Experience.Flight Crew.Last 90 Days: 65
- Experience.Flight Crew.Type: 350
- ASRS Report Number.Accession Number: 1510304
- Human Factors: Situational Awareness
- Human Factors: Communication Breakdown
- Communication Breakdown.Party1: Flight Crew
- Communication Breakdown.Party2: ATC

**Events**

Anomaly.ATC Issue : All Types
Anomaly.Deviation - Altitude : Undershoot
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Deviation - Procedural : Clearance
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
When Detected : In-flight
Result.Flight Crew : Took Evasive Action
Result.Flight Crew : Requested ATC Assistance / Clarification
Result.Air Traffic Control : Provided Assistance

Assessments

Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

Narrative: 1

On takeoff both myself and the Copilot flying thought we were only cleared to 2000 feet MSL. When switching over to departure we checked in at 2000 feet. About 3 miles into the [climb] flying runway heading we started to get a "pull up" audio and proceeded to climb, checked in again and told the controller what we were doing. Departure mentioned that we where cleared to 5000 not 2000. No other action was taken.

Synopsis

Gulfstream Captain reported being climb restricted to 2000 feet, then receiving a terrain warning. ATC clarified clearance was to 5000 feet, not 2000 feet.
ACN: 1510237 (32 of 50)

Time / Day
Date: 201801
Local Time Of Day: 1801-2400

Place
Locale Reference.Airport: ORD.Airport
State Reference: IL
Altitude.AGL.Single Value: 1000

Environment
Flight Conditions: VMC

Aircraft
Reference: X
ATC / Advisory.Tower: ORD
Aircraft Operator: Air Carrier
Make Model Name: Regional Jet 700 ER/LR (CRJ700)
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Nav In Use.Localizer/Glideslope/ILS: 28R
Flight Phase: Initial Approach
Airspace.Class B: ORD

Person
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: Pilot Flying
Qualification.Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number.Accession Number: 1510237

Events
Anomaly.Aircraft Equipment Problem: Less Severe
Anomaly.Deviation - Altitude: Overshoot
Anomaly.Deviation - Procedural: Clearance
Anomaly.Ground Event / Encounter: Other / Unknown
Anomaly.Inflight Event / Encounter: Unstabilized Approach
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Person: Air Traffic Control
Detector.Person: Flight Crew
When Detected: In-flight
Result.Flight Crew: Requested ATC Assistance / Clarification
Result.Flight Crew: Overcame Equipment Problem
Result.Air Traffic Control: Issued Advisory / Alert

Assessments
Contributing Factors / Situations: Airport
Contributing Factors / Situations: Airspace Structure
Contributing Factors / Situations: ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations: Procedure
Primary Problem: ATC Equipment / Nav Facility / Buildings

**Narrative: 1**

We were on the ILS at approximately 1000 feet when tower cleared another aircraft to take off from an intersecting offset runway. We had broken out into VMC conditions right about 1000 feet. We had the autopilot coupled and when the other aircraft began its takeoff roll, it must have obstructed the glideslope because our glideslope indication went down very quickly. The autopilot chased the glideslope with a rapid descent rate which caused an aural warning, "sink rate". I immediately disconnected the autopilot and hand flew the remainder of the approach to land. We regained stability by 850 feet. The Tower controller transmitted to check our altitude because he had gotten an alert as well. We landed the aircraft without incident. The cause of the incident was that we were landing on a non-standard runway because of poor braking action on other runways while other aircraft were being launched off of an intersecting offset runway.

I would suggest not allowing these operations to take place simultaneously.

**Synopsis**

CRJ700 pilot reported losing the ILS signal on approach due to an aircraft departing from an adjacent runway blocking the signal.
**ACN: 1510031 (33 of 50)**

**Time / Day**
- Date: 201801
- Local Time Of Day: 1801-2400

**Place**
- Locale Reference. ATC Facility: BOI.TRACON
- State Reference: ID
- Altitude MSL Single Value: 11700

**Aircraft : 1**
- Reference: X
- ATC / Advisory. TRACON: BOI
- Make Model Name: Cessna 340/340A
- Crew Size. Number Of Crew: 1
- Flight Plan: IFR
- Mission: Personal
- Flight Phase: Climb
- Route In Use: Vectors
- Airspace. Class E: BOI

**Aircraft : 2**
- Reference: Y
- ATC / Advisory. TRACON: BOI
- Make Model Name: Any Unknown or Unlisted Aircraft Manufacturer
- Airspace. Class E: BOI

**Person**
- Reference: 1
- Location Of Person. Facility: BOI.TRACON
- Reporter Organization: Government
- Function. Air Traffic Control: Approach
- Qualification. Air Traffic Control: Fully Certified
- Experience. Air Traffic Control. Time Certified In Pos 1 (yrs): 20
- ASRS Report Number. Accession Number: 1510031
- Human Factors: Situational Awareness
- Human Factors: Workload
- Human Factors: Distraction

**Events**
- Anomaly. ATC Issue: All Types
- Anomaly. Deviation - Procedural: Published Material / Policy
- Anomaly. Deviation - Procedural: Clearance
- Anomaly. Inflight Event / Encounter: CFTT / CFIT
- Detector. Person: Air Traffic Control
- When Detected: In-flight
- Result. Air Traffic Control: Issued New Clearance
- Result. Air Traffic Control: Issued Advisory / Alert

**Assessments**
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Weather
Primary Problem: Human Factors

**Narrative: 1**

Aircraft X was on a direct route and climbed. I had turned them slightly northeast before I normally would because of depicted/reported weather. The turn on course was given above the MVA the aircraft was in. At this time I was coordinating with adjacent airspace about a weather deviation. Aircraft X was in a 10000 ft MVA approaching a 12000 ft MVA @ 11500 ft approximately 5 miles from the higher MVA. I inquired if the pilot could increase the rate of climb. The pilot responded negative so I turned the aircraft towards a lower MVA. I was also communicating with the second aircraft that was deviating around weather. When I next observed Aircraft X he was exiting the 12000 ft MVA into a 10000 ft MVA at 11700 ft. After the aircraft had reached 12000 ft I resumed his navigation on course.

**Synopsis**

BOI TRACON Controller reported vectoring an aircraft into a higher MVA after the aircraft was unable to climb fast enough.
ACN: 1510024 (34 of 50)

**Time / Day**

Date: 201801
Local Time Of Day: 0601-1200

**Place**

Locale Reference.ATC Facility: U90.TRACON
State Reference: AZ
Altitude.MSL.Single Value: 6000

**Aircraft**

Reference: X
ATC / Advisory.TRACON: U90
Make Model Name: Skyhawk 172/Cutlass 172
Crew Size.Number Of Crew: 1
Flight Phase: Cruise
Route In Use: Vectors
Airspace.Class E: U90

**Person : 1**

Reference: 1
Location Of Person.Facility: U90.TRACON
Reporter Organization: Government
Function.Air Traffic Control: Approach
Qualification.Air Traffic Control: Fully Certified
ASRS Report Number.Accession Number: 1510024
Human Factors: Communication Breakdown
Human Factors: Training / Qualification
Human Factors: Situational Awareness
Communication Breakdown.Party1: ATC
Communication Breakdown.Party2: ATC

**Person : 2**

Reference: 2
Location Of Person.Facility: U90.TRACON
Reporter Organization: Government
Function.Air Traffic Control: Approach
Qualification.Air Traffic Control: Fully Certified
ASRS Report Number.Accession Number: 1510029
Human Factors: Communication Breakdown
Human Factors: Situational Awareness
Communication Breakdown.Party1: ATC
Communication Breakdown.Party2: ATC

**Events**

Anomaly.ATC Issue: All Types
Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Deviation - Procedural: Clearance
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Person: Air Traffic Control
When Detected: In-flight  
Result: Air Traffic Control: Issued New Clearance  

Assessments  
Contributing Factors / Situations: Human Factors  
Contributing Factors / Situations: Procedure  
Primary Problem: Human Factors  

Narrative: 1  
I was training a trainee that is having difficulties and has been for a long time in training. I was focused on maintaining our separation on final and trying to get him to slow down air carrier and speed up aircraft ahead of him to ensure that we not lose separation. [The trainee] issued Aircraft X 6000 on initial contact, [the controller] realized as soon as he said that it was wrong and said out loud that's wrong it needs to be 7000. [The controller] went back and told the aircraft to maintain 7000. The aircraft did not read it back.  

I should have caught the no read back but I moved back to the aircraft on final to ensure we had our separation. We were about to get relieved so I wanted the position to be clean and ready to give to the new controller. During the overlap, I did a final scan before I unplugged and I saw the aircraft level at 6000 and then realized I did not hear him read back 7000. The aircraft did not read back the 6000 either, but I knew [the controller] was going to give him 7000 so I did not correct the first hear back error.  

The trainee is struggling and I was very frustrated at this point in the session and was so focused on the final and speed control that I did not give the attention needed to Aircraft X's read back. This is basic air traffic and I should have caught this mistake.  

I don't have any recommendations. The trainee makes bad decisions and I have to continuously correct them and explain over and over again why it won't work. I need to correct myself and not let a trainee continue to go when they are performing as poorly as this. If I would have been on position by myself I don't think I would have missed the read back because the session was not busy but the trainee made it busy.  

Narrative: 2  
I got the relief briefing for [arrivals], and the trainee advised that Aircraft X was descending to 070. I took the position and immediately made sure that all the aircraft were separated laterally since the trainee has had instances of giving up a position with aircraft on converging courses at the same altitudes. I didn't notice Aircraft X was already level at 060 in a 063 MVA, and the Trainer tapped the scope and pointed at Aircraft X about 1 minute after I took the position and brought it to my attention. I then climbed Aircraft X up to 065 and brought him in for an ILS approach.  

Synopsis  
Tracon Controllers reported the Developmental commanded an aircraft to descended below the MVA.
Time / Day
Date: 201801
Local Time Of Day: 0601-1200

Place
Locale Reference. ATC Facility: PCT.TRACON
State Reference: VA
Altitude. MSL. Single Value: 1100

Aircraft
Reference: X
Aircraft Operator: Air Carrier
Make Model Name: Regional Jet 200 ER/LR (CRJ200)
Crew Size. Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Initial Approach
Route In Use: Visual Approach

Person
Reference: 1
Location Of Person. Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function. Flight Crew: Captain
Function. Flight Crew: Pilot Flying
Qualification. Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number. Accession Number: 1509851
Human Factors: Distraction
Human Factors: Human-Machine Interface
Human Factors: Troubleshooting

Events
Anomaly. Deviation - Procedural: Published Material / Policy
Anomaly. Inflight Event / Encounter: CFTT / CFIT
Detector. Automation: Aircraft Terrain Warning
Detector. Person: Flight Crew
When Detected: In-flight
Result. Flight Crew: FLC complied w / Automation / Advisory
Result. Flight Crew: Became Reoriented

Assessments
Contributing Factors / Situations: Human Factors
Primary Problem: Human Factors

Narrative: 1
On the river visual 19 into DCA I was Pilot Flying. Abeam the Georgetown reservoir I got a little low as the altitude recommendation slipped out of my mind. I was between 1100 and 1200 feet when we got an obstacle caution. I corrected by pulling up and climbing 100 feet. The caution extinguished and we continued the approach in visual conditions.

Synopsis

CRJ-200 Captain reported responding to CFIT obstacle warning on approach.
**ACN: 1509716**

**Time / Day**
- Date: 201801
- Local Time Of Day: 1801-2400

**Place**
- Locale Reference.ATC Facility: ALB.TRACON
- State Reference: NY
- Altitude.MSL.Single Value: 2200

**Aircraft**
- Reference: X
- ATC / Advisory.TRACON: ALB
- Aircraft Operator: Corporate
- Make Model Name: Gulfstream V / G500 / G550
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 91
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Initial Climb
- Route In Use: Direct
- Airspace.Class E: ALB

**Person**
- Reference: 1
- Location Of Person.Facility: ALB.TRACON
- Reporter Organization: Government
- Function.Air Traffic Control: Departure
- Qualification.Air Traffic Control: Fully Certified
- Experience.Air Traffic Control.Time Certified In Pos 1 (yrs): 3
- ASRS Report Number.Accession Number: 1509716
- Human Factors: Confusion
- Human Factors: Situational Awareness
- Human Factors: Communication Breakdown

**Events**
- Anomaly.ATC Issue: All Types
- Anomaly.Deviation - Procedural: Published Material / Policy
- Anomaly.Deviation - Procedural: Clearance
- Anomaly.Inflight Event / Encounter: CFTT / CFIT
- Detector.Person: Air Traffic Control
- When Detected: In-flight
- Result.Flight Crew: Requested ATC Assistance / Clarification
- Result.Air Traffic Control: Issued New Clearance

**Assessments**
- Contributing Factors / Situations: Airspace Structure
- Contributing Factors / Situations: Human Factors
Contributing Factors / Situations : Procedure
Primary Problem : Human Factors

**Narrative: 1**

Aircraft X departed on an IFR flight plan. Aircraft X was issued an IFR clearance by approach. The flight strip indicated that Aircraft X was given initial altitude of 5,000 ft. When Aircraft X departed and checked in with approach the pilot was told to ident. The pilot asked if they were still required to go HIDAL which is a common initial fix given to PSF departures. I observed Aircraft X climbing through 2,000 ft direct HIDAL. The pilot was instructed to climb to 10,000 ft and reaching 5,000 ft cleared direct BAF. The pilot acknowledged and also stated that they were getting a terrain awareness warning. I handed off Aircraft X to the ARTCC without further incident.

Pilots need to state their assigned altitude on initial call up when departing. I should have confirmed the assigned altitude when the pilot did not state it. Continuing to focus on hear back/read back when issuing clearances should always be of paramount importance.

**Synopsis**

ALB TRACON Controller reported an aircraft that checked in climbed to the wrong altitude and received a terrain alert.
ACN: 1509520 (37 of 50)

Time / Day

Date: 201801
Local Time Of Day: 0601-1200

Place

Locale Reference.Airport: ONT.Airport
State Reference: CA
Altitude.MSL.Single Value: 6000

Environment

Flight Conditions: VMC
Weather Elements / Visibility. Visibility: 8
Light: Daylight

Aircraft

Reference: X
ATC / Advisory.TRACON: SCT
Aircraft Operator: Air Carrier
Make Model Name: A319
Crew Size. Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Climb
Airspace.Class E: SCT

Person

Reference: 1
Location Of Person. Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function. Flight Crew: Pilot Flying
Qualification. Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number. Accession Number: 1509520
Human Factors: Distraction
Human Factors: Human-Machine Interface
Human Factors: Workload
Human Factors: Communication Breakdown
Communication Breakdown. Party1: Flight Crew
Communication Breakdown. Party2: ATC

Events

Anomaly. ATC Issue: All Types
Anomaly. Conflict: Airborne Conflict
Anomaly. Inflight Event / Encounter: CFTT / CFIT
Detector. Automation: Aircraft RA
Detector. Person: Flight Crew
When Detected: In-flight
Result. Flight Crew: Took Evasive Action
Result. Flight Crew: FLC complied w/ Automation / Advisory
Result. Air Traffic Control: Issued Advisory / Alert
Result. Air Traffic Control: Issued New Clearance

Assessments
Contributing Factors / Situations: Environment - Non Weather Related
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Procedure
Primary Problem: Human Factors

Narrative: 1
We departed 26R on SNSHN2 DEP which is routed over the POM VOR. On this SID the POM VOR is to be crossed at or below 8,000 feet. Clearance was to climb via the SID except maintain 14,000. SoCal advised us of VFR traffic less than a mile north of the POM VOR at 6,500. Shortly before reaching the POM VOR on the SID, SoCal told us to amend altitude to maintain 6,000. We then stopped the climb and leveled at 6,000. Shortly after leveling and approaching the POM VOR and making the turn on the SID towards terrain, we received an RA to descend due to the VFR traffic over the POM VOR, which had us descending towards terrain.

Instead of SoCal flying us directly into traffic over the POM VOR, SoCal should have provided us with a heading to give us terrain and traffic avoidance. [They] gave us neither. If it is a necessity the VFR aircraft operate over the POM VOR, since the SID is at or below 8,000, the VFR traffic needs to be at or above 9,000. At the very minimum at or above 8,500 to provide separation. 6,500 is the same altitude we will be climbing through to climb via the SID.

Synopsis
A319 pilot reported airborne conflict (RA) with VFR traffic during SID climb.
ACN: 1509420 (38 of 50)

Time / Day
Date: 201801
Local Time Of Day: 1801-2400

Place
Locale Reference.ATC Facility: ZMP.ARTCC
State Reference: MN
Altitude.MSL.Single Value: 2750

Environment
Flight Conditions: VMC
Light: Night

Aircraft
Reference: X
ATC / Advisory.Center: ZMP
Aircraft Operator: Air Carrier
Make Model Name: Regional Jet 700 ER/LR (CRJ700)
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Mission: Passenger
Nav In Use: FMS Or FMC
Flight Phase: Initial Approach
Route In Use: Visual Approach
Airspace.Class E: ZMP

Person: 1
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: Captain
Function.Flight Crew: Pilot Flying
Qualification.Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number.Accession Number: 1509420
Human Factors: Situational Awareness

Person: 2
Reference: 2
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: Pilot Not Flying
Function.Flight Crew: First Officer
ASRS Report Number.Accession Number: 1509421
Human Factors: Situational Awareness

Events
Anomaly.Deviation - Procedural : Published Material / Policy
Anomaly.Inflight Event / Encounter : CFTT / CFIT
Detector.Automation : Aircraft Terrain Warning
When Detected : In-flight
Result.Flight Crew : Became Reoriented
Result.Flight Crew : FLC complied w / Automation / Advisory
Result.Flight Crew : Took Evasive Action

Assessments
Contributing Factors / Situations : Human Factors
Primary Problem : Human Factors

Narrative: 1
I was pilot flying and was cleared for a visual approach runway 36 into Lacrosse. We were at 3000 feet approximately 10-12 miles on a right base for the FAF CIVMI when I started a descent to 2500 feet. Passing through 2800-2700 feet, we got an EGPWS caution and then an EGPWS warning. I saw the silhouette of terrain the entire time on the visual approach and noted it out -loud to my First Officer. However, I did not start the climb until I got the EGPWS warning and climbed back up to 2700-2800 feet until the EGPWS cleared. I believe the lowest we got was approximately 2500 feet 10 miles from CIVMI. We continued to an uneventful visual approach.

Misread the profile section of the RNAV GPS 36 approach and thought PKRNA was at 2500 feet (not 3000 feet). Complacency and not thoroughly checking what altitude I could have gone. [My] suggestion [is to] double-check the fix altitudes on the profiles page when cleared for a visual, [and] be very careful of current altitude and what [I] can descend down to. In this case, I should have remained at 3000 feet until at least within 8 miles of CIVMI. I mistakenly began the descent to 2500 feet earlier than I should have. Also, verbalize, "We can descend to 2500 feet within 8 miles of the CIVMI".

Narrative: 2
We were executing a visual approach RNAV 36 into La Crosse airport. While descending on the visual somewhere between 8,000 and 2,500 feet, on a left base for the FAF, we received the aural EGWPS Caution and then Warning. The lowest we could have been would have been 2500 feet. The Captain overrode the autopilot and did a slight climb to 2,700 or 2,800 feet, and we were then around eight miles from CIVMI (FAF). We both had visual terrain silhouette in sight, and the Captain stated such to me as we got the [initial] EGWPS Caution. After assuring the FAF at the proper altitude, we continued an uneventful approach to landing.

I believe that the altitude was slightly misjudged during an approach at night. That coupled with the misinterpreted altitude at our specific location for the RNAV approach, led to the EGWPS Caution. It would have helped to double-check the altitudes on the approach. We could have verbalized 3,000 feet until eight miles to CIVMI, considering we were on a visual approach. We also need to avoid becoming too complacent with visual cues at night.

Synopsis
CRJ-700 flight crew reported receiving an EGPWS terrain alert on a night visual approach into LSE airport.
ACN: 1509121 (39 of 50)

Time / Day
Date: 201801
Local Time Of Day: 1201-1800

Place
Locale Reference.ATC Facility: ZAB.ARTCC
State Reference: NM
Altitude.MSL.Single Value: 7000

Environment
Flight Conditions: VMC
Light: Daylight

Aircraft: 1
Reference: X
ATC / Advisory.Center: ZAB
Aircraft Operator: Air Carrier
Make Model Name: B747 Undifferentiated or Other Model
Crew Size. Number Of Crew: 2
Operating Under FAR Part: Part 91
Flight Plan: IFR
Mission: Cargo / Freight
Flight Phase: Initial Climb
Route In Use: Vectors
Airspace.Class E: U90

Aircraft: 2
Reference: Y
Make Model Name: Any Unknown or Unlisted Aircraft Manufacturer
Airspace.Class E: U90

Person
Reference: 1
Location Of Person. Facility: ZAB.ARTCC
Reporter Organization: Government
Function. Air Traffic Control: Enroute
Qualification. Air Traffic Control: Fully Certified
Experience. Air Traffic Control. Time Certified In Pos 1 (yrs): 12
ASRS Report Number. Accession Number: 1509121
Human Factors: Situational Awareness
Human Factors: Confusion

Events
Anomaly.ATC Issue: All Types
Anomaly.Conflict: Airborne Conflict
Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Deviation - Procedural: Clearance
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Person : Air Traffic Control
When Detected : In-flight
Result.Air Traffic Control : Issued New Clearance
Result.Air Traffic Control : Issued Advisory / Alert
Result.Air Traffic Control : Separated Traffic

Assessments
Contributing Factors / Situations : ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations : Human Factors
Contributing Factors / Situations : Airspace Structure
Contributing Factors / Situations : Procedure
Primary Problem : Procedure

Narrative: 1
Aircraft X called on my frequency on the ground looking for an IFR clearance. The airport is only a couple of miles into TRACON's airspace so I called them to see how we wanted to handle the departure. The filed route took the aircraft south out of his way until going northbound. I thought it would be much more efficient to go from the airport direct to their first fix. TRACON was good with that and they blocked 7,000 ft and below for the departure. The Minimum IFR Altitude in the area is 6,000 ft. When the aircraft finally departed, I radar identified Aircraft X and immediately called traffic on an untracked, unknown VFR target, Aircraft Y. Military airspace also became active and I needed to route the aircraft west and north of the airspace. I turned the aircraft left and proceeded to issue a traffic alert about the VFR traffic. Aircraft X was climbing very fast and I was not sure what altitude the aircraft was actually out of when a vector was issued.

As my supervisor suggested, I will talk about this scenario in main briefing breakout so a best practice can be developed and also review rules and procedures for clearing an aircraft off the ground.

Synopsis
ZAB Center Controller reported vectoring an aircraft without knowing the aircraft's altitude, which may have been below the Minimum IFR altitude.
**Time / Day**
- Date: 201801
- Local Time Of Day: 0601-1200

**Place**
- Locale Reference.ATC Facility: NCT.TRACON
- State Reference: CA
- Altitude.MSL.Single Value: 4000

**Aircraft**
- Reference: X
- ATC / Advisory.TRACON: NCT
- Aircraft Operator: Air Carrier
- Make Model Name: B737-700
- Crew Size.Number Of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Nav In Use: FMS Or FMC
- Flight Phase: Descent
- Route In Use: Visual Approach
- Route In Use: Vectors
- Airspace.Class E: NCT

**Person**
- Reference: 1
- Location Of Person.Facility: NCT.TRACON
- Reporter Organization: Government
- Function.Air Traffic Control: Approach
- Qualification.Air Traffic Control: Fully Certified
- Experience.Air Traffic Control.Time Certified In Pos 1 (yrs): 1
- ASRS Report Number.Accession Number: 1508868
- Human Factors: Confusion
- Human Factors: Training / Qualification

**Events**
- Anomaly.ATC Issue: All Types
- Anomaly.Deviation - Procedural: Published Material / Policy
- Anomaly.Deviation - Procedural: Clearance
- Anomaly.Inflight Event / Encounter: CFTT / CFIT
- Detector.Person: Air Traffic Control
- When Detected: In-flight
- Result.Air Traffic Control: Issued New Clearance
- Result.Air Traffic Control: Issued Advisory / Alert

**Assessments**
- Contributing Factors / Situations: Human Factors
- Contributing Factors / Situations: Procedure
- Primary Problem: Human Factors
**Narrative: 1**

I was vectoring the Aircraft for a visual approach and he was descending to 3000. The Aircraft was heading for a Minimum Vectoring Altitude (MVA) of 3900. When the Aircraft was at 4200 feet, I initiated a turn away from the MVA. The Aircraft was slower to turn than anticipated. I asked the pilot if he had the terrain in sight. The pilot stated that he did. I instructed him to maintain terrain and obstruction clearance and turned him further away from the MVA before he descended into it. My supervisor told me I could not do that. My supervisor instructed me to file this report. While I was in training, my instructors taught me that instructing the pilot to maintain his own terrain and obstruction clearance before he was below the MVA was correct.

**Synopsis**

A TRACON Controller reported assigning an aircraft an altitude below the Minimum Vectoring Altitude.
ACN: 1508507 (41 of 50)

**Time / Day**
- **Date:** 201801
- **Local Time Of Day:** 0001-0600

**Place**
- **Locale Reference.ATC Facility:** ZMA.ARTCC
- **State Reference:** FL
- **Altitude.MSL.Single Value:** 1500

**Environment**
- **Flight Conditions:** IMC

**Aircraft**
- **Reference:** X
- **ATC / Advisory.Center:** MIA
- **Make Model Name:** EMB-505 / Phenom 300
- **Crew Size.Number Of Crew:** 2
- **Operating Under FAR Part:** Part 91
- **Flight Plan:** IFR
- **Mission:** Ferry
- **Flight Phase:** Initial Approach
- **Route In Use:** Direct
- **Airspace.Class E:** ZMA

**Person**
- **Reference:** 1
- **Location Of Person.Aircraft:** X
- **Location In Aircraft:** Flight Deck
- **Function.Flight Crew:** Captain
- **Function.Flight Crew:** Pilot Flying
- **Qualification.Flight Crew:** Air Transport Pilot (ATP)
- **ASRS Report Number.Accession Number:** 1508507

**Events**
- **Anomaly.ATC Issue:** All Types
- **Anomaly.Deviation - Procedural:** Published Material / Policy
- **Anomaly.Inflight Event / Encounter:** CFTT / CFIT
- **Detector.Automation:** Aircraft Terrain Warning
- **When Detected:** In-flight
- **Result.Flight Crew:** Took Evasive Action
- **Result.Flight Crew:** FLC complied w / Automation / Advisory

**Assessments**
- **Contributing Factors / Situations:** Human Factors
- **Contributing Factors / Situations:** Procedure
- **Primary Problem:** Procedure

**Narrative:** 1
While on a ferry flight to KEYW, we were cleared direct to the airport shortly after takeoff. Since the weather was IFR in KEYW, we were next cleared direct to GUCEL to set us up for the RNAV (GPS) Runway 27. About 40 miles north, we were cleared direct to BURPY. A short time later, we were told to cross BURPY at 1500 feet and given approach clearance for the RNAV (GPS) Runway 27. We started our descent and leveled off at 1500 feet. About 10 miles outside of BURPY, we got an Obstacle warning from our GPWS. A climb was initiated and ATC was contacted. The warning stopped as we climbed through 3,500-4,000 feet. Once clear, we queried ATC and descended back down, crossing BURPY at 1500 feet and performed a stable approach and normal landing.

Synopsis
Captain of an EMB-505 reported receiving, and complying with a GPWS obstacle-warning while at the ATC assigned altitude.
**ACN: 1507924 (42 of 50)**

**Time / Day**
Date: 201712

**Place**
Locale Reference: ATC Facility: BOI.TRACON
State Reference: ID
Altitude.MSL.Single Value: 11000

**Environment**
Flight Conditions: IMC

**Aircraft**
Reference: X
ATC / Advisory: TRACON: BOI
Aircraft Operator: Air Carrier
Make Model Name: Large Transport
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Descent
Airspace.Class E: BOI

**Person: 1**
Reference: 1
Location Of Person: Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function: Flight Crew: First Officer
Function: Flight Crew: Pilot Flying
Qualification: Flight Crew: Air Transport Pilot (ATP)
Experience: Flight Crew.Type: 922
ASRS Report Number: Accession Number: 1507924

**Person: 2**
Reference: 2
Location Of Person: Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function: Flight Crew: Captain
Function: Flight Crew: Pilot Not Flying
Qualification: Flight Crew: Air Transport Pilot (ATP)
ASRS Report Number: Accession Number: 1507936

**Events**
Anomaly.ATC Issue: All Types
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Automation: Aircraft Terrain Warning
When Detected: In-flight
Result: Flight Crew: Took Evasive Action

Assessments
Contributing Factors / Situations: ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations: Procedure
Primary Problem: Procedure

Narrative: 1
During the arrival phase into BZN at an ATC assigned altitude of 11,000 ft, we received a GPWS "Pull-up" warning while in IMC conditions. I was the flying pilot, and we were on an ATC assigned vector.

We complied with the GPWS recovery procedures of the SOP, climbed to approximately 12,000 ft, and reported the altitude deviation to ATC. The flight then continued to BZN without further incident.

Narrative: 2
Level at assigned altitude of 11000 ft we received a GPWS Terrain warning. We followed SOP escape maneuver and were quickly clear of the event.

We were on RV (Radar Vectors) and level. I recommend ATC raise their MVA.

Synopsis
Air Carrier flight crew reported a GPWS alert while in IMC conditions on radar vectors.
A Cessna 182 was proceeding direct to DRK at 9000. At the time, I believed the highest upcoming Minimum IFR Altitude (MIA) to be 9000 feet. I likely believed this because I misread the MIA chart that showed it to be 9900 feet. As the aircraft approached the area with the 9900 MIA, Albuquerque center called me asking if the aircraft could accept higher.
At this point, I saw my mistake and immediately climbed the aircraft to 10000 feet. However, the aircraft was too close the area with the 9900 MIA, and entered it while still climbing to 10000 feet. The aircraft spent a few radar hits in the area before reaching 10000 feet.

I should have payed closer attention to the MIA chart to verify what altitude would be required. Upon entering the area, I should have issued a terrain alert to the pilot.

**Synopsis**

ZLA ARTCC reported misreading Minimum IFR Altitude chart, contributing to an aircraft flying below the Minimum IFR Altitude.
**Time / Day**
- **Date** : 201712
- **Local Time Of Day** : 0001-0600

**Place**
- **Locale Reference**. **ATC Facility** : BTV.Tower
- **State Reference** : VT

**Environment**
- **Flight Conditions** : VMC
- **Light** : Daylight

**Aircraft**
- **Reference** : X
- **ATC / Advisory.Tower** : BTV
- **Aircraft Operator** : Corporate
- **Make Model Name** : Falcon 2000
- **Crew Size. Number Of Crew** : 2
- **Operating Under FAR Part** : Part 91
- **Flight Plan** : IFR
- **Nav In Use** : FMS Or FMC
- **Flight Phase** : Initial Approach
- **Route In Use** : Visual Approach
- **Airspace.Class C** : BTV

**Person : 1**
- **Reference** : 1
- **Location Of Person.Aircraft** : X
- **Location In Aircraft** : Flight Deck
- **Reporter Organization** : Corporate
- **Function.Flight Crew** : Pilot Flying
- **Function.Flight Crew** : Captain
- **Qualification.Flight Crew** : Air Transport Pilot (ATP)
- **ASRS Report Number. Accession Number** : 1507358
- **Human Factors** : Distraction
- **Human Factors** : Fatigue

**Person : 2**
- **Reference** : 2
- **Location Of Person. Aircraft** : X
- **Location In Aircraft** : Flight Deck
- **Function.Flight Crew** : Pilot Not Flying
- **Function.Flight Crew** : Captain
- **Qualification.Flight Crew** : Air Transport Pilot (ATP)
- **ASRS Report Number. Accession Number** : 1507689
- **Human Factors** : Distraction
- **Human Factors** : Situational Awareness

**Events**
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Automation: Air Traffic Control
Detector.Automation: Aircraft Terrain Warning
Detector.Person: Air Traffic Control
When Detected: In-flight
Result.Flight Crew: FLC complied w/ Automation / Advisory
Result.Flight Crew: Became Reoriented
Result.Air Traffic Control: Issued Advisory / Alert

Assessments
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Procedure
Primary Problem: Human Factors

Narrative: 1
Cleared for the Visual Approach to Runway 33 at KBTV. Weather was 10+ visibility and clear skies. Approximately 3-4 miles on a straight in final we got the "terrain pull up" warning. I was the flying pilot in the left seat and was visual. I immediately climbed until the warning subsided. At approximately the same time, the Tower advised they were getting a low altitude warning. I was hand flying the plane due to a rapid descent and a later than normal decent from altitude from ATC. At all, times I was in visual conditions and felt I was in a proper position to land, we had the ILS loaded and displayed but I obviously was below the ILS Glideslope. Distracted for a moment by the last minute steep descent from ATC and the resulting visual approach. We landed normally and without incident.

I was tired after several long days and was considering using the Fatigue call but failed to do so. Also, I should have paid more attention to the ILS but I was visual and felt the terrain was well below us. Obviously it wasn't. This was my first time in 17 years that the Terrain warning activated. It was an eye opening experience on many levels.

Narrative: 2
While descending out of altitude in we received an extremely late descent out of the flight levels even after we ask multiple times for lower. Pilot Flying had to put the airplane in a descent with the air brakes out in a high rate of descent. This put us behind the approach segment of the visual approach. Despite this the Pilot Flying was able to establish a normal rate of decent several miles out but with the mountains in Burlington and the unusual visual clues in the hills it put us in a lower than normal approach position. Just as I was about to warn him his air brakes where still out and we were getting low the GPWS went off and the tower gave us a warning of an upcoming mountain. We immediately corrected and told the tower we were correcting. Climbed up, established a normal stabilized approach, and landed with no incident.

Should have not been so distracted and [should have] warned Pilot Flying earlier in the approach phase. We also could have taken vectors in order to make a more normal descent. Air brakes usage could have been monitored better. Following the glide path would have helped as well. Taking the visual approach for granted in the mountains also contributed to this unusual situation. ATC could have been much more helpful as well.

Synopsis
DA-2000 pilot reported low altitude alert while on visual approach, by both the aircraft systems and control tower.
Date: 201712
Local Time Of Day: 1801-2400

Locale Reference.Airport: ZZZ.Airport
State Reference: US
Altitude.AGL.Single Value: 0

Flight Conditions: VMC

Reference: X
ATC / Advisory.Tower: ZZZ
Aircraft Operator: Air Carrier
Make Model Name: EMB ERJ 170/175 ER/LR
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Nav In Use: FMS Or FMC
Flight Phase: Taxi
Airspace.Class B: ZZZ

Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: Captain
Function.Flight Crew: Pilot Flying
Qualification.Flight Crew: Air Transport Pilot (ATP)
Experience.Flight Crew.Type: 3826
ASRS Report Number.Accession Number: 1507349

Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: Dispatch

Anomaly.Deviation - Procedural: Weight And Balance
Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Automation: Aircraft Terrain Warning
Detector.Person: Flight Crew
When Detected: In-flight
Result.Flight Crew: Took Evasive Action
Result.Flight Crew: Returned To Clearance
Result. Flight Crew: FLC complied w/ Automation / Advisory
Result. Flight Crew: Became Reoriented

Assessments

Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Procedure
Primary Problem: Human Factors

Narrative: 1

After we got the takeoff data, I put Zero Fuel Weight (ZFW) on performance INIT 3/3 in 4L. I noticed we have to move 3 passengers from C to A. I got distracted after we got the new data. I forgot to confirm the ZFW in the performance page. I thought I confirmed it but actually, I didn't. I put the speed, temperature, ECS and flex. Then we started taxing. When we reached the end of the runway, I noticed on top of the speed tap FMS speed showing 3 dashes. I checked the takeoff page and saw all the speed and flap showing correct. I thought it's a glitch. I put the speed to manual speed and did the takeoff from runway 09. After takeoff, we flew tower assigned runway heading. During climb out, got a frequency change to Center and got direct to Initial Fix. Did a left turn and started to climb. During climb, we got CAUTION TERRAIN Aural Message. Hence we made a left turn and avoid the weather balloon. After that, we went direct to Initial Fix. Mean time going through the performance INIT page, I noticed I forgot to confirm the ZFW. At that point, I confirmed and fix the FMS speed problem and continued the flight. [My] suggestion [is to] avoid getting distracted while putting the numbers and double-check the numbers after we did.

Synopsis

EMB-175 Captain reported that after making changes to the takeoff data he did not confirm the zero fuel weight. Captain also reported a CFTT warning during the takeoff.
ACN: 1507276

Time / Day
Date: 201712
Local Time Of Day: 1801-2400

Place
Locale Reference.ATC Facility: ZLC.ARTCC
State Reference: UT
Altitude.MSL.Single Value: 10000

Aircraft
Reference: X
ATC / Advisory.Center: ZLC
Make Model Name: Cessna Citation Mustang (C510)
Crew Size.Number Of Crew: 2
Flight Plan: IFR
Nav In Use: FMS Or FMC
Flight Phase: Descent
Airspace.Class D: PIH

Person
Reference: 1
Location Of Person.Facility: ZLC.ARTCC
Reporter Organization: Government
Function.Air Traffic Control: Enroute
Qualification.Air Traffic Control: Fully Certified
ASRS Report Number.Accession Number: 1507276
Human Factors: Workload
Human Factors: Situational Awareness

Events
Anomaly.ATC Issue: All Types
Anomaly.Deviation - Procedural: Published Material / Policy
Anomaly.Inflight Event / Encounter: CFTT / CFIT
Detector.Person: Air Traffic Control
Result.Air Traffic Control: Issued New Clearance

Assessments
Contributing Factors / Situations: ATC Equipment / Nav Facility / Buildings
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Staffing
Primary Problem: Human Factors

Narrative: 1
A Cessna 510 was descending for PIH. I issued him 10000 feet and failed to notice that there was another 11000 feet area on his route. I was busy with multiple other traffic situations and DJJ departure/arrivals and didn't see that the C510 was in the 11000 feet area until he was already several miles inside it. The Terrain Alert Volume alert was not
triggered that I saw. At that time, I issued the C510 the airport position, and he reported the field in sight, and was cleared for the visual. [I] recommend having a D-side, double check route before issuing descent clearance.

Synopsis
ZLC certified professional controller reported issuing descent, which put aircraft into a subsequent higher MVA.
ACN: 1507275  (47 of 50)

Time / Day
Date : 201712
Local Time Of Day : 0001-0600

Place
Locale Reference.ATC Facility : ZSE.ARTCC
State Reference : WA
Altitude.MSL.Single Value : 4000

Aircraft
Reference : X
ATC / Advisory.Center : ZSE
Aircraft Operator : Corporate
Make Model Name : Citationjet (C525/C526) - CJ I / II / III / IV
Crew Size.Number Of Crew : 2
Operating Under FAR Part : Part 91
Flight Plan : IFR
Mission : Passenger
Nav In Use : GPS
Flight Phase : Final Approach
Route In Use.Other
Airspace.Class E : ZSE

Person : 1
Reference : 1
Location Of Person.Facility : ZSE.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Fully Certified
Experience.Air Traffic Control.Time Certified In Pos 1 (yrs) : 4
ASRS Report Number.Accession Number : 1507275
Human Factors : Communication Breakdown
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : ATC

Person : 2
Reference : 2
Location Of Person.Facility : ZSE.ARTCC
Reporter Organization : Government
Function.Air Traffic Control : Enroute
Qualification.Air Traffic Control : Developmental
ASRS Report Number.Accession Number : 1507271
Human Factors : Communication Breakdown
Human Factors : Training / Qualification
Human Factors : Situational Awareness
Communication Breakdown.Party1 : ATC
Communication Breakdown.Party2 : ATC
**Events**

Anomaly.ATC Issue : All Types  
Anomaly.Deviation - Procedural : Published Material / Policy  
Anomaly.Deviation - Procedural : Clearance  
Anomaly.Inflight Event / Encounter : CFTT / CFIT  
Detector.Person : Air Traffic Control  
When Detected : In-flight

**Assessments**

Contributing Factors / Situations : Airspace Structure  
Contributing Factors / Situations : Human Factors  
Contributing Factors / Situations : Procedure  
Primary Problem : Human Factors

**Narrative: 1**

The Citation jet was pointed out with Approach and cleared for the RNAV approach direct [fix] at 4000 feet. I told the Radar Controller at least 2 times that the MIA (Minimum IFR Altitude) was 4200 feet prior to the aircraft reaching the fix. The Radar Controller didn't amend the clearance and it appeared the aircraft was at 4000 feet prior to [fix] and below the MIA of 4200 feet. The scale of the map at quick glance could have appeared to the Radar Controller that [fix] was in a 4000 foot MIA and that's why they took no action.

**Narrative: 2**

[Report narrative contained no additional information.]

**Synopsis**

A Controller working the Radar Assist position and their trainee reported the Radar Controller allowed an aircraft to descend below the Minimum IFR Altitude even though they advised him of the MIA.
**ACN: 1507023 (48 of 50)**

**Time / Day**
- Date: 201712

**Place**
- Locale Reference: Airport: ZZZ.Airport
- State Reference: US
- Altitude: MSL. Single Value: 11000

**Environment**
- Flight Conditions: VMC
- Light: Night

**Aircraft**
- Reference: X
- ATC / Advisory: TRACON: ZZZ
- Aircraft Operator: Air Carrier
- Make Model Name: A319
- Crew Size: Number of Crew: 2
- Operating Under FAR Part: Part 121
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Final Approach
- Airspace: Class E: ZZZ

**Component**
- Aircraft Component: GPWS
- Aircraft Reference: X
- Problem: Malfunctioning

**Person: 1**
- Reference: 1
- Location Of Person: Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function: Flight Crew: First Officer
- Function: Flight Crew: Pilot Flying
- Qualification: Flight Crew: Air Transport Pilot (ATP)
- Experience: Flight Crew: Type: 731
- ASRS Report Number: Accession Number: 1507023
- Human Factors: Confusion
- Human Factors: Situational Awareness

**Person: 2**
- Reference: 2
- Location Of Person: Aircraft: X
- Location In Aircraft: Flight Deck
- Reporter Organization: Air Carrier
- Function: Flight Crew: Captain
Function: Flight Crew: Pilot Not Flying
Qualification: Flight Crew: Air Transport Pilot (ATP)
Experience: Flight Crew: Total: 10705
Experience: Flight Crew: Type: 8943
ASRS Report Number: Accession Number: 1507062
Human Factors: Confusion
Human Factors: Situational Awareness

Events
Anomaly: Aircraft Equipment Problem: Less Severe
Anomaly: Flight Deck / Cabin / Aircraft Event: Other / Unknown
Anomaly: Deviation - Procedural: Clearance
Anomaly: Inflight Event / Encounter: CFTT / CFIT
Detector: Automation: Aircraft Terrain Warning
Detector: Person: Flight Crew
When Detected: In-flight
Result: Flight Crew: Took Evasive Action
Result: Air Traffic Control: Provided Assistance

Assessments
Contributing Factors / Situations: Aircraft
Primary Problem: Aircraft

Narrative: 1

We were on downwind vectors with Approach Control with the last assigned altitude of 11,000 and an ALT FMA. Just prior to leveling off I had V/S-1000 in the FCU. As well, not long after leveling off I made the remark about the proximity of the nearby mountains as they came into clear view and the lack of any terrain displayed on either of our ND’s. The Captain also agreed, and we both checked that the brightness was adequate and the TERR switches were selected on. Neither one of us stated concern over the altitude above terrain; only that we expected to see “green returns” on the ND. Shortly thereafter, the Captain mentioned that he saw a tiny speck of green off the nose. Almost immediately the EGPWS aural alert “terrain, terrain” sounded and my first response was to initiate the terrain escape maneuver. Almost immediately, the Captain took priority and confirmed that TOGA was set and full aft stick was commanded. The events were somewhat blurred as I remember looking at the PFD for RA information as well as the ND for some situational awareness when the “priority left” aural call was made.

I can honestly say that this was my first EGPWS event while flying Part 121 for more than 9,000 hours. I will state that it was disorienting due to the way these events are classically seen in simulator training. Usually, there is a lot of yellow and red displayed on the ND, and you are in IMC, and one is pre-loaded to think about terrain escape. Our event took place in night VMC and we were both actively discussing it all the while clearly seeing all the terrain. I remember telling ATC that we were performing a terrain escape maneuver and we would level at 15,000, well above the highest published MSA for the approach. ATC responded somewhat incredulously that we experienced a terrain warning and that 11,000 was an appropriate vector altitude for that sector. The Captain and I discussed the current state of the aircraft and I was given control again and requested vectors back on the ILS from 15,000. The Captain made a PA announcement to the cabin explaining what had occurred and that we would be landing safely shortly. We had to work hard to bring the airplane down the glide path due to the higher energy state as well as having a tailwind on approach. We met the stabilized approach criteria and landed with no further
"excitement." Once shut down at the gate, we were present as soon as possible to say goodbye to the passengers. The Captain was in the jetway when the lead Flight Attendant mentioned to me that one of them injured themselves during the terrain escape maneuver. After everybody deplaned, we offered assistance to the Flight Attendants and made sure that they were okay to continue with the layover. It was made known that they were a bit shook up and one had a stubbed toe and a slight limp. There were no reported problems with the passengers, and we went to different hotels as scheduled and ended the duty day.

**Narrative: 2**

With aircraft on autopilot, under Approach Control, [we] received a GPWS terrain warning while level at 11,000 feet and 280 knots. Pilot Monitoring took control of aircraft and performed terrain escape maneuver. Warning ceased quickly and aircraft was leveled at 15,000 feet. Approach Control was informed of response to terrain warning and Approach confirmed previous clearance of 11,000 feet. Vectors to a normal approach and landing occurred. Post flight, the flight attendants reported that they may have received minor injuries during the escape maneuver. They had been performing final cabin checks during the maneuver.

**Synopsis**

A319 flight crew reported receiving an erroneous EGPWS terrain warning at ATC assigned altitude during night time vectors to ILS final. During the prescribed escape maneuver, a flight attendant suffered minor injury.
ACN: 1507005 (49 of 50)

Time / Day
Date: 201712
Local Time Of Day: 1801-2400

Place
Locale Reference.ATC Facility: ZZZ.Tower
State Reference: US
Altitude.MSL.Single Value: 2000

Environment
Flight Conditions: IMC
Weather Elements / Visibility. Visibility: 3
Light: Night

Aircraft
Reference: X
ATC / Advisory.Tower: ZZZ
Aircraft Operator: Air Carrier
Make Model Name: B737-700
Crew Size.Number Of Crew: 2
Operating Under FAR Part: Part 121
Flight Plan: IFR
Mission: Passenger
Flight Phase: Initial Approach
Airspace.Class C: ZZZ

Person: 1
Reference: 1
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: First Officer
Function.Flight Crew: Pilot Not Flying
Qualification.Flight Crew: Air Transport Pilot (ATP)
Experience.Flight Crew.Last 90 Days: 349
ASRS Report Number.Accession Number: 1507005
Human Factors: Human-Machine Interface
Human Factors: Situational Awareness
Human Factors: Workload
Human Factors: Communication Breakdown
Communication Breakdown.Party1: Flight Crew
Communication Breakdown.Party2: Flight Crew

Person: 2
Reference: 2
Location Of Person.Aircraft: X
Location In Aircraft: Flight Deck
Reporter Organization: Air Carrier
Function.Flight Crew: Captain
While on arrival an hour prior to landing, I (PM) retrieved the ATIS and the Performance W&B for a south landing. Coming from the west, I figured 20R was the obvious choice of runway and with the current weather conditions on the field, I assumed we would be doing the ILS to 20R. As nearly the entire flight was a sterile cockpit except a few conversations about turbulence and weather, I had set myself up for the ILS to 20R and waited for the Captain to brief it. As we approached the top of descent, the Captain stated that he was planning the RNP Z to 20L and told me that he wanted me to request that with approach. He briefed the approach, we discussed a few details about RNP value to input and accomplished the descent checklist. The Captain, for some reason, seemed adamant about landing on the left side.

When I checked in with Approach, I gave him our request. Their reply was, "You can expect 20L. I'll have to see about the RNP approach." Figuring we would not get the RNP approach, I went ahead and tuned in the ILS frequency on my side to 20L. As we entered the downwind, Approach said they were unable the RNP approach, plan the ILS. The Captain then briefed the ILS approach to 20L.

As we were being vectored, we were going in and out of heavy rain and turbulence. As we were getting close to turning base leg, Approach came on the frequency and stated that the braking action for Runway 20L was reported poor by a 737. Approach then told
another aircraft to plan runway 20R. The Captain was adamant to me he still wanted Runway 20L.

Approach called us on our base leg to 20L and restated the braking action for 20L was poor and to turn to a heading and intercept the LOC to 20R and gave us the frequency. The Captain went heads down in the FMC to program the approach. At this point, I already had the frequency in standby on my side so I switched the frequency, then turned to my iPad to pull up the approach. As this was all taking place, we were cleared to 2000 ft, cleared for the ILS, and handed off to Tower.

As we continued, the Captain was calling for flaps and trying to quickly configure the airplane while I was contacting Tower. I noticed the Captain had LNAV engaged on the panel, so I was assuming he was intercepting the LOC course with that. The next thing I knew, we blew through the LOC and the Captain had clicked off the autopilot and was rejoining. At this same time, Tower stated that he showed us left of course. I stated that we were correcting.

The Captain then reengaged the autopilot and was still configuring the airplane. While all this was going on, I'm still trying to reset the baro for the minimums and the next thing I know, the Captain turned off the autopilot again. While I was looking to try to double check his frequency, Tower said they were showing us off course and I believed he asked us if we wanted to go around.

The Captain stated to me, "I've got it now," so I assumed that meant he had the LOC and the GS captured. So while I'm looking at my PFD, I'm relaying to ATC that we got it. By the time I was done with my transmission to ATC, the Captain was diving the aircraft to the ground I saw at least a 1500 fpm descent all at the same time my LOC guidance was gone. I heard sink rate, and I told the Captain to go around. ATC is calling us saying they have a low altitude alert, go around, and I hear CAUTION TERRAIN, TOO LOW TERRAIN, PULL UP. I'm now yelling at the Captain to "GO AROUND PULL UP!" I'm grabbing for the controls because I don't see him reacting. My display now has red terrain on it and I don't have any lateral guidance on my flight director. The Captain said he was going around and told me he was climbing.

Tower then told us to climb to 3000 ft and gave us a heading. We still don't have any lateral guidance and HDG mode won't engage. We finally get the aircraft stable, cleaned up on the right heading, and the Captain was now telling me I WANT 20L. I request 20L and then I have to listen to ATC telling us about the same braking action report on 20L and when they say poor, the Captain is saying 4. Then the Captain wants to argue out loud with me about he's saying "4" not "poor". I go ahead and just start briefing the ILS approach to 20L and making sure all the Captain was doing was flying the airplane. I programmed the FMC, made sure we both had the right frequency, and then landed without incident. The braking action was good. When we got to the gate, the Captain apologized for putting us in that position. I believe ATC put us in a bad position by not giving us a choice or time to make a decision. By turning us and clearing us for an approach we were not prepared for, this put us immediately into the red. Even though he was trying to be helpful by giving us the LOC frequency, there was not enough time to brief and make sure we were prepared to fly the approach in IMC conditions. We failed to recognize the threat and stop the approach right there. With the current weather conditions being an additive, I'm sure getting on the ground was a priority rather than getting beat up by the turbulence and heavy rain with extended vectors. I was immediately overloaded by changing frequencies, talking to Tower, and trying to configure the aircraft and pull up the right approach plate on my iPad. Then with the distraction of
flying through the LOC, the Captain disconnecting the autopilot, and hand flying, I never finished what I was doing.

**Narrative: 2**

Third leg of the third and last day of the pairing. As the weather in ZZZ was low and light rain was reported, I briefed the STAR and the desired approach, the RNAV Z to 20L. ATC told us he could get us the left, but wasn’t sure if we could get the RNAV approach, so we went over the ILS to 20L as the backup approach. After crossing the final point on the STAR, ATC told us we would fly the ILS approach. At this point we were essentially on a downwind leg. We quickly reprogrammed the box, reset the DA, and prepared for the ILS approach.

While descending to 3000 ft MSL, ATC gave us a base turn. Almost immediately thereafter we heard that a Company aircraft had reported braking action "Poor" on 20L, and ATC asked us what we wanted to do. The FO and I briefly discussed it, and I said I wanted to continue to 20L. I thought it was extremely unlikely that the report was accurate, when only light rain was falling. It didn't matter, however, as ATC directed us to the ILS to 20R, gave us a dogleg turn, told us to descend to 2000 ft MSL, and cleared us for the approach. At this point, we were only 10 miles out, and unprepared for this approach.

While the better course of action would have been to go around early and set up more deliberately for the new approach, we tried to quickly reprogram and reset once again. We were partially configured with landing gear down and flaps 15. I selected VOR/LOC, and the flight director indicated VOR/LOC capture. However, the aircraft didn't appear to capture the final approach course, flying through it to the left of course. I attempted to correct back as (now) Tower informed us of our drift. I then noticed that we were starting to go above glide path as well. I clicked off the autopilot while the FO was trying to find out why our course guidance didn't appear to be working. Distracted by these several issues, I inadvertently entered a much steeper descent than I had intended. Within a few seconds, we had gone from fully automated and on course to fully manual with no reliable course or vertical guidance.

The first indication of trouble was Tower telling us we were below glide path. Then the GPWS gave me its several warnings in rapid order: SINK RATE, TOO LOW TERRAIN, and PULL UP. The FO also strongly directed a go-around. I applied maximum power and performed the escape maneuver. I don't know our altitude or sink rate during these brief hectic moments. I do know that I was well behind the aircraft, and was, in our current language, "in the red." The FO, as Pilot Monitoring, by his forceful intervention, helped bring me back toward the green, and the rest of the story is uneventful: we followed directions to downwind, calmly briefed and flew the ILS approach to 20L (it turns out the Company aircraft had called the braking action as "4," not "poor"), and landed (we reported the braking action as "good").

There were several points at which I now recognize that I should have gone around or made other arrangements with ATC. I allowed myself to be pushed into a corner with artificial time constraints, and tried to make everything work. A calmer, and much safer, alternative would have been to extend the timeline by overflying the airport and coming back again more prepared.

**Synopsis**
B737 flight crew reported that during a rapid descent in IMC they flew through the localizer and received several warnings in rapid order "SINK RATE", "TOO LOW TERRAIN", and "PULL UP".
ACN: 1506906 (50 of 50)

**Time / Day**
- Date: 201712
- Local Time Of Day: 1201-1800

**Place**
- Locale Reference: ATC Facility: HIO. Tower
- State Reference: OR
- Altitude.AGL.Single Value: 500

**Environment**
- Flight Conditions: IMC

**Aircraft**
- Reference: X
- ATC / Advisory.Tower: HIO
- Aircraft Operator: Corporate
- Make Model Name: PC-12
- Crew Size.Number Of Crew: 1
- Operating Under FAR Part: Part 91
- Flight Plan: IFR
- Mission: Passenger
- Flight Phase: Final Approach
- Route In Use.Other
- Airspace.Class D: HIO

**Person**
- Reference: 1
- Location Of Person.Facility: HIO.Tower
- Reporter Organization: Government
- Function.Air Traffic Control: Local
- Qualification.Air Traffic Control: Fully Certified
- ASRS Report Number.Accession Number: 1506906
- Human Factors: Situational Awareness
- Human Factors: Confusion

**Events**
- Anomaly.ATC Issue: All Types
- Anomaly.Deviation - Altitude: Overshoot
- Anomaly.Deviation - Altitude: Crossing Restriction Not Met
- Anomaly.Deviation - Procedural: Published Material / Policy
- Anomaly.Deviation - Procedural: Clearance
- Anomaly.Inflight Event / Encounter: CFIT / CFIT
- Detector.Automation: Air Traffic Control
- Detector.Person: Air Traffic Control
- When Detected: In-flight
- Result.General: Flight Cancelled / Delayed
- Result.Flight Crew: FLC complied w / Automation / Advisory
- Result.Flight Crew: Executed Go Around / Missed Approach
- Result.Flight Crew: Became Reoriented
Assessments
Contributing Factors / Situations: Airspace Structure
Contributing Factors / Situations: Human Factors
Contributing Factors / Situations: Procedure
Primary Problem: Human Factors

Narrative: 1

Aircraft X checked in on the ILS approach. I issued him a landing clearance, requested current flight conditions, and issued the RVR. A couple minutes later on the approach I received a Low Altitude Warning. I immediately issued the Low Altitude Warning and the altimeter. Aircraft X responded with roger. I noticed that Aircraft X continued to descend and upon reaching 600 ft at about 4.5 miles out on the ILS approach, I suggested that he climb and begin the missed approach. The pilot responded in the affirmative but still continued to display on the radar that he was descending and then hit 500 ft at about 4 mile final. I double checked again that he was flying the missed and received an affirmative response. It was then that the pilot again responded that he was going missed approach. I immediately coordinated with Approach that I advised the pilot to fly the missed approach, received instructions from them to use the published missed approach and for Aircraft X to maintain 4000 ft. I issued the instructions and shipped Aircraft X back to Approach.

I have no idea what the pilot was doing or what he was looking at on his equipment to create this situation. I am not sure what I could have done differently. I am pretty sure I saved this dudes life!

Synopsis

HIO Tower Controller reported issuing Low Altitude Warning to an aircraft on the ILS descended below the glideslope.